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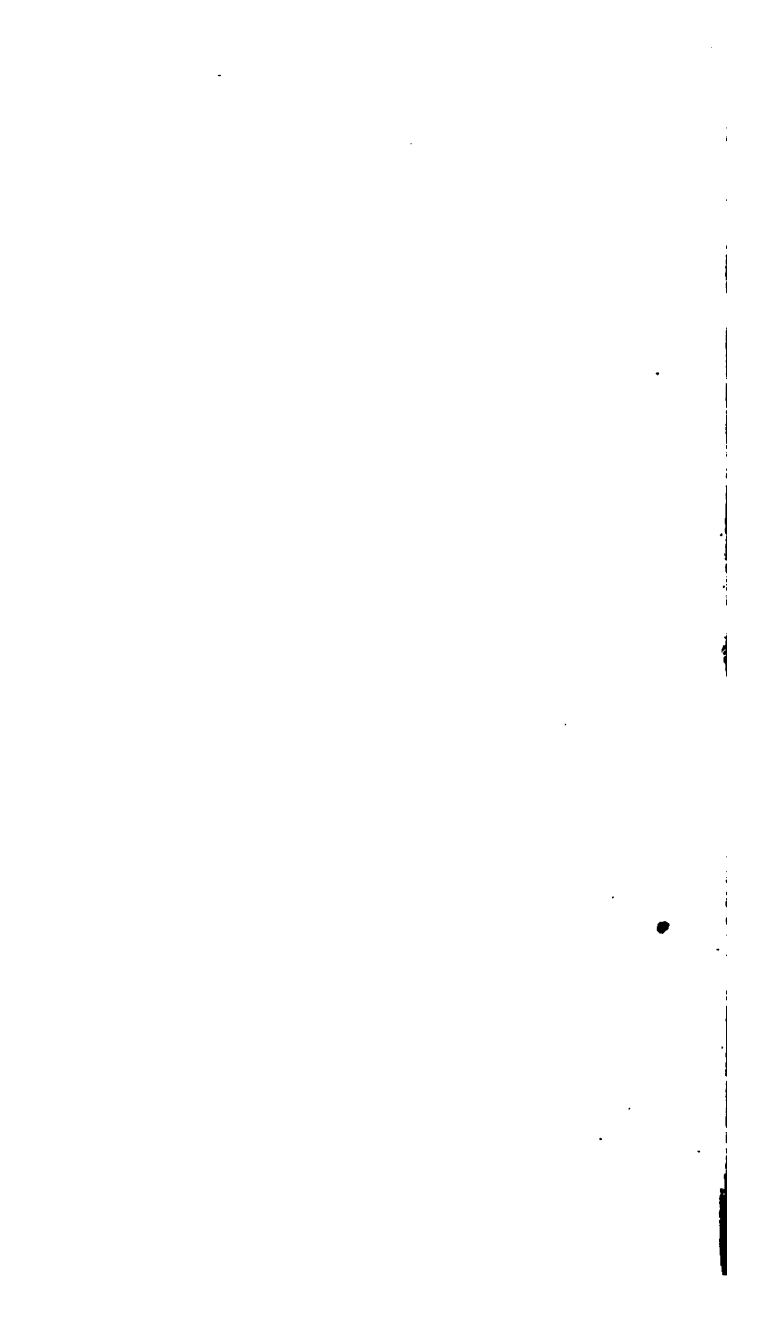


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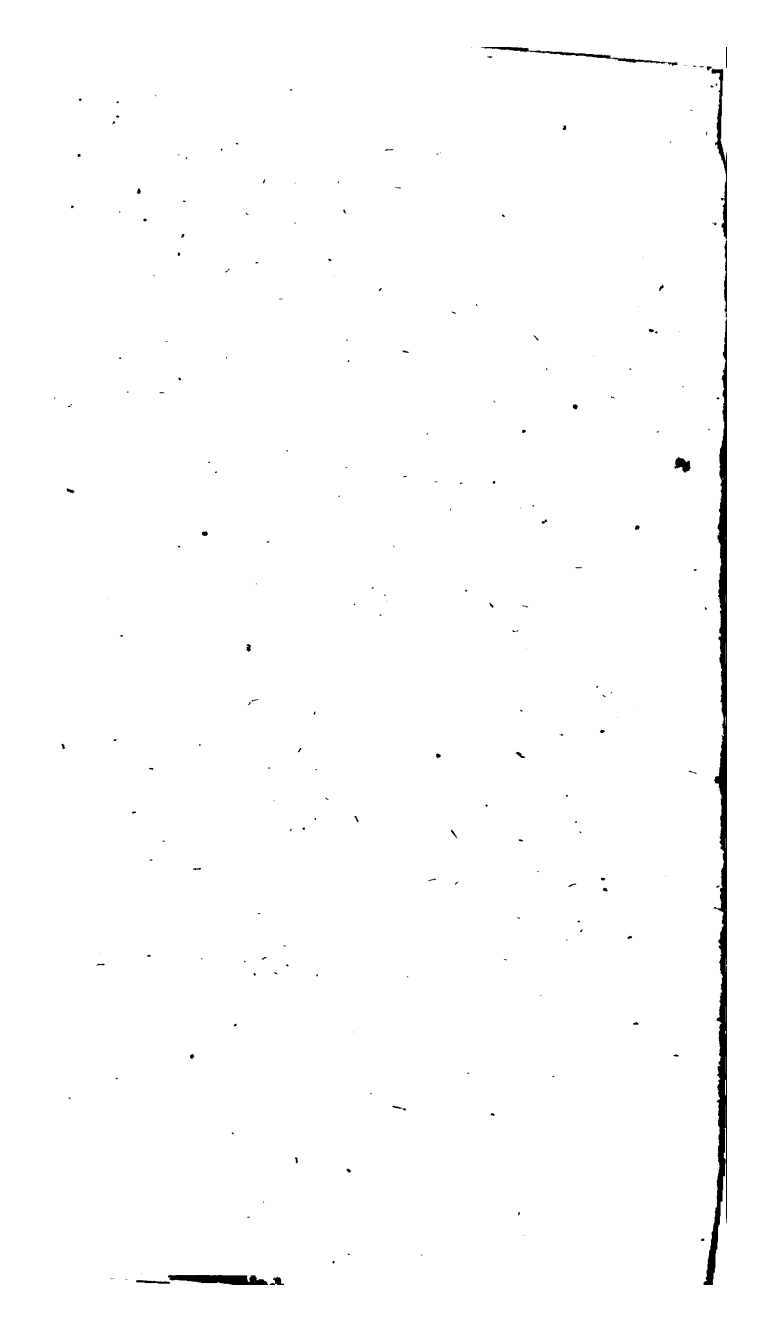


*The Gift of
Hercules Warren Fay,
of
Westboro, Mass.
(Class of 1862).
Rec. 31 Aug. 1860.*

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° Arts COMPANION,
Or a New
ASSISTANT
FOR THE
INGENIOUS.

In Three PARTS.

PART I. Containing, The Art of Drawing in Perspective made easy and fully explain'd; the Manner of Drawing with Crayons, and the best Receipts for making them of all Colours: The Way of painting on Glafs; Instructions for Etching on Copper-Plate, and to cast Amber in any Shape: With a new and curious Method of making the various Kinds of Varnishes for Japanning upon Glafs, Wood, or Metal; and to make gilt Japan-ware as beautiful and light as that bought from the East-Indies.

PART II. Containing the Art of Drawing and Painting in Water-Colours; with sufficient Directions for delineating a View or Prospect to the utmost Exactness, and for colouring the same or any other Print in the most beautiful Manner; Also Instructions for making transparent Colours of every Sort, and the Manner of taking off *Medals* instantly, by various Methods not before made publick, interspersed with many curious Receipts for the Use of Painters, Statuaries, Founders, &c.

PART III. Containing the Art of Painting in Miniature; whereby the various Methods of Drawing are made easy to any tolerable Capacity: To which are added Directions for Shadowing, Stipling, &c. with many curious Receipts for preparing Colours peculiar to this Kind of Painting; likewise the Preparation of an excellent Polish and Shell: The whole taken from some of the best *Italians* and other Masters.

LONDON: Printed, and **DUBLIN** Reprinted by I. JACKSON at the *Globe* in *Meath-Street*, 1749. Price bound, 1 7½.

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THE PREFACE.

THE following Piece is designed for the Instruction and Entertainment of Gentlemen and Ladies, who chuse to divert themselves in the curious Arts of Drawing, Japanning, Painting upon Glass, Varnishing upon Metal, Wood or Pastboard, and of taking Views and Prospects justly, according to the Rules of Perspective.

The Author has taken Care to prescribe short and easy Directions for the speedy attaining the Knowledge of these useful and amusing Arts, without giving the Students the Trouble of consulting large Volumes (which are generally taken from one another right or wrong) or of learning several Branches of the Mathematicks, as is generally thought necessary, in order to understand Perspective; a Science, without the Knowledge of which, it is impossible to make any great Improvement in the Arts of Drawing or Painting, or even to be a Judge of good Drawing, or to understand whether one is Right or Wrong, in what one would invent or design.

I must confess, I owe my Knowledge of several valuable Receipts, to some Manuscripts of the great Mr. Boyle, which have never been printed; and have fallen into my Hands by Means of the same noble Lord, his Relation, whom I have mentioned in my Art of Drawing, and Painting in Water-colours,

'I am likewise obliged to a worthy Gentleman, who, after a deliberate Study of Perspective, set me to rights in a few Hours, when I was at any Loss. As for the rest, they are Observations from the Experiments which I have
made

made from time to time, at a large Expence, and with great Industry.

I have been upbraided by some Workmen in Curiosities, for publishing Receipts of Value, to instruct the Gentry in the Manner of Drawing and Painting, and in Arts of the like kind; for, say they, it is a Damage to the Workmen who get their Livelihood by such Things. I have a short Answer to this Argument; namely, that there are none of the Receipts, which I publish, but what are either my own Invention, or I have bought at a good Price, or else have been presented with by People of Fashion, with their Desire to have them made publick; and these are such as would never come to the Knowledge of the Workmen, if I was not to communicate them in this Manner, by which they have an Opportunity of improving themselves, as many of them have done, from Things that I have already published in the same way; so that I can say, from my own certain Knowledge, that many of them are obliged to me, and, instead of complaining, ought to thank me.





THE
METHOD
OF
LEARNING to DRAW
IN
PERSPECTIVE, &c.



CHAP I.

*Short Rules for Drawing in Perspective,
which will prove of great Use to all De-
signers.*

WHEN I observe the Faults daily committed in the Designing of Landscapes, or drawing Views and Prospects, I more and more find the Necessity of knowing a little Perspective, to correct and avoid such Errors; for, understanding that Art will render any one capable of drawing any Thing with mathematical Truth and Certainty.

But I conceive that the Reason, why so many Mistakes are commonly made in Drawings, proceeds from the Apprehensions that some have of the Length of time it will take up, to render themselves Masters of Perspective, and from being frightned at the Difficulties they conceive are in that Study; particularly imagining, that one must be first well grounded in the Mathematicks:

PART I.

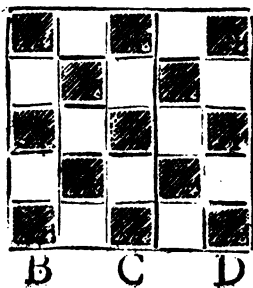
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This I know has discouraged many from engaging in the Rules relating to this Art; but for their Sakes I undertake, in this Tract, to instruct them in the following Lessons how to lay any Plan in Perspective, and raise Pillars or Buildings to due Heights according to their Distances.

Lesson I. *Of the Plan.*

FIG. I.



Suppose we have a square Piece of Pavement, as in Figure I, consisting of 25 Pieces of Marble, each a Foot square, it must be measured exactly, and laid regularly down upon Paper: You may likewise, for your better Observation, mark every other Stone or Marble black, which will better inform you how every particular Square will appear, when we have a true perspective View of them; or else you may number every one, and, when the following Lesson is done, number those in the perspective Plan, with the same Figures as are marked on the first Plan.

Lesson II. *Of laying Figure I. in Perspective,*

It is to be understood in Perspective that there are two Points to be considered; the first we call the Point of Sight;

At A, you see the Plan of Figure I. This is divided into Squares, as mentioned in that Figure ; the three at the Bottom, marked B, C, D, in both, and the Squares in the Plan A, marked 1, 2, 3, 4, are those which are marked in perspective with the same Numbers.

Now, to lay your Plan in perspective, fix your Point of Sight as you observe in the Figure, or more or less to the right or left as you think proper ; then draw the Line K, K, parallel to, and at what Distance you will *from*, the Line L, L : then raise a Line on each side from L to K, to form the Figure you see, as a Frame to your Picture ; then draw a Line from the Corner K, which is the Point of Distance, to L, and this Line will regulate your Work.

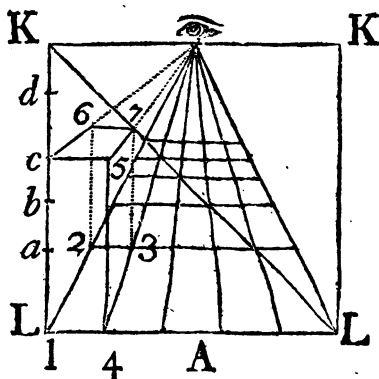
Then draw Lines, from the Squares of your Plan to the Point of Sight, as exactly as possible ; and wherever your Line of ~~Distance~~ cuts those Lines, which are drawn from the Squares of your Plan to the Point of Sight, that marks where your Squares in perspective ought to be ; then draw Lines parallel to the Line L, L, where the Line of Distance cuts, and that will give you the true Figure of every Square : So D, in the perspective Plan, answers to D, in the measured Plan ; and 1, 2, 3, 4, answers to the others in the same.

When you have done this, the next Rule you are to know is, how to raise either Pillars, Trees, Houses, or any other Bodies, according to their respective Heights, at different Distances and Proportion, on the Plan you have laid down.

Lesson III.

How to raise Pillars, or any Bodies of a certain Proportion, in Perspective.

FIG. III.



You have now your Plan measured out, in perspective, into Squares of a Foot; one of these Squares in this Lesson serves for the Base, or Bottom, of a pillar a Foot thick. This Figure III. is exactly of the same Dimensions of the Plan laid in perspective at Figure II. First mark the Line L, K, in equal Proportions, by the same Scale of the Ground plan, Figure II; as, *a, b, c, d*, which are so many Feet in height; and they, standing on the Base of the first Figure, are Up-rights, not in perspective: Then draw a Line parallel with L, 1, from Number 4, which gives you the Front of the Body you are to raise, and if it is to be only three Feet high, draw a Line cross from C to the Line raised from No. 4; and that determines the Height, which you will then find to be a Foot wide, and three Feet high by Measure: Then

from the Top of the Line 4 draw a Line, with a Black-lead Pencil, to the Point of Sight, and raise another Line from 3 parallel to the Line 4, till it touches the pencil'd Line, passing from 5 to the Point of Sight, which gives you the Side-appearance of the Column, or Body, as you will see it from the Place where you stand. [The Line from point 3 should be drawn with a Pen, because it is to remain.] Then with a Pencil draw a Line from C to the point of Sight, which will determine the other Line, to make the Shape of the Top of the Column; and then raise a Line parallel with L, 1, with a Pencil, from the Point 2, till it touches the Line from C to the point of Sight; draw then a parallel Line to C, 5, at 6, 7, and you will have the Square of the Top of the Pillar, or Column, as you can observe it from the place where you stand, which I suppose to be at A. [You must remember, that the Line drawn from 2 to 6 is only an imaginary Line, to be rubbed out; for it cannot be seen from the place where you stand, and therefore must not appear in the Drawing; but you should not leave it out, because it shews you where to regulate the Top of your Column, and teaches you how to place your Column upon its Base with Certainty.] By this means you may see the Front and one Side of your Column: And the Line from 1 to 2 must also be rubbed out, because it can't be seen.

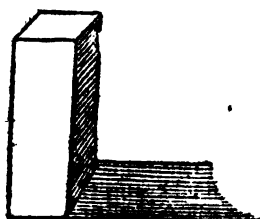
Then finish your Column only with the Lines

from 1 to C,	}	from C, to 5,
from 4 to 5,		from 6, to 7, and
from 3 to 7,		from 1 to 4;

and it will be drawn without any Imperfection, and appear as follows in Figure IV.

(11)

FIG. IV.



When this is done, you may place another Column on any one of the Squares erected in the same Manner, observing to fling your Shades all on one Side, and then you cannot err : But especially mind where the dotted Lines are in Figure III.

When you can master these few Lessons, which you may gain with very little Pains, you will be capable of doing any Thing in this Way, that will be regular and certain, and know the Faults of the Ignorant and Unskilful.



C H A P. II.

Of Painting upon Glafs.

PAINTING upon Glafs is an Art which has generally appeared so difficult, that few have succeeded in the Attempt ; and yet there is no Representation of any portrait can appear more elegant, than in a picture done well in this Manner : For you have all the Softness and all the Tenderness that can be desired in a picture, and it is easy too for any person to work upon , for there are no Out-lines to draw, nor any Shades to make, but you put on the Colours without the Trouble of either.

The Pictures, which we use on this Occasion, are those done in Mezzo tinto, or what we call Mezzo tincto Prints, for their Shades are rubbed down with an Instrument on the Copper-plates ; so that the several Lines, which are forced to be drawn to represent the shady Part of any common Print, are by this Means scumbled together, and appear as soft and united as in any Piece done with Indian Ink.

When you are provided with such Prints as you like, cut off the Paper of the Margin, so that none be left but the Print itself ; then take some of the finest Crown-glass, and have it cut exactly to the Size of your Prints, and, when you have cleaned your Glass very well, lay on one Side of it some fine Venice Turpentine, as thin as possible, with a Brush made of Hog's-hair ; and, if you perceive the Turpentine to lie unequally, pass a piece of Wood, made like a flat Ruler over it till it lies equal in every part ; then wet the Back of your Print with a Sponge and Water, and lay the pictur'd Side upon the turpentin'd Side of the Glass, taking Care that every Part of it lies close to the Glass, and that there are no Bubbles or Blisters to be seen ; then you may roll it over with a wooden Roll, made like a Cylinder of two Inches diameter, to fix it close to the Glass ; and when that is done, wet the Back of the Print again with a Sponge and Water, till the Paper will rub off with your Fingers ; then rub it gently till there remains only the Picture itself upon the Glass ; so will you have all the Lines and Shades very visible, as if it was a fine drawing in Indian Ink : Then let it remain till the next Day to dry, for else the Colours would not take, because they are ground in Oil.

SECT. I. *Colours for Painting on Glass with the Necessaries for such a Work.*

At most Colour-shops of note in London, we may meet with Colours of several sorts ground in Oil, and tied up in little Bladders to be sold at Three pence, a Groat, or Six pence a piece, according as they are more or less valuable : Of these provide as follow.

Whites.

Whites.

Flake White,
White-Lead.

Yellows.

English Pink,
Yellow Oaker,
Dutch Pink,
Yellow Orpiment.

Reds.

Rose Pink,
Vermillion,
Red-Lead,
Indian Red,
Lake,
Carminè.

Blues.

Ultramarine,
Blue Bise.

Verditer,
Prussian Blue,
Sanders Blue,
Indigo,

Blacks.

Lamp Black,
Ivory Black.

Greens.

Verdigrease distill'd,
Verdigrease and Yellow
Oaker mixt,
Verdigrease and English
Pink mixt,
Verdigrease and Dutch
Pink mixt.

Browns.

Spanish Brown,
Umber.

When you are provided with these Colours, you may mix them one with another to what Degree of Colour you think proper upon a *Pallet*, with a smooth Knife, with a tender bending Blade, adding a little more of one Colour to another, mixing them well till you have what you want.

To get the Colour out of the Bladders, prick a *Mole* at the Bottom of each Bladder you design to use, and press the Bladder till you have Colour enough upon your *Pallet* for your present Use; for in a Day's Time the Colours will dry, and can never be recovered.

Provide on this Occasion a Box about two Foot and a half long, about five Inches high, and sixteen Inches wide, with Partitions in it as follow.



The Use of this Box, which is to keep all your painting Things together, and preserve them clean, I shall here very particularly explain.

At Number 1 must be a Box of tinn'd Iron No. 1. to be placed in the wooden Box, because it must hold Oil of Turpentine to clean your pencils when you have done work.

When you paint you must take care to use only one pencil in a Colour, or, in other words, to have a pencil for each Colour; and as soon as you have done using them for the Day, clean them from the Colours, by dipping them into the Oil of Turpentine, and having the hairy part of the pencil on the tinn'd Division, between Number 1 and Number 2, press your Finger hard on the Hair, and draw it four or five times over the Tin, then will the Colours which

which came out of the Pencils, fall into the Tin-box, Number 2, and by that Means the Pencils will be clean and the several Mixtures of Colours, that fall there with their Oils, will become a good Size for Gold.

Then lay your Pencils with their Sticks in No. 5. the Box No. 5, and they will be fit for Use another Time.

Note, the Pencils should be of two Sorts, that is, some of Camel's-hair to paint with, such as will come to a Point when the Colour is in them, and some dry Brushes of white Hair, never to be dipp'd in Colour, but used only to scumble or join one Colour in another when they are just laid on, so that they appear soft, and you cannot distinguish where any one leaves off abruptly.

You ought at least to have three Dozen of Camel's Hair pencils of all Sizes, and a Dozen and half of rough Brushes, with Sticks to each about ten Inches or a Foot long; the Sticks may be bought ready made at the Colour-shops; they are commonly made of Cedar or Brazil-wood, but some nice Persons have them turn'd in Ivory.

At numb. 4, you should have a Case No. 4. divided of Wood in several Parts to keep your dry Colours in, such as Carmine and Ultramarine, with others that you may keep by you to grind when you want them, for sometimes you may have Occasion in the Country to grind a Colour that you want.

The Reason of having Divisions made in this Box is to keep these Colours from mixing with each other, and thereby spoiling one another; for if there were no separate Apartments, sometimes in a hasty taking out or putting in of these Colours you may disturb the Papers they are commonly wrapp'd in so much, that some of the Colours will be spilled. The fine or rich Colours, such as Ultramarine or Carmine, may rather be bought in Powder than ground in Oil; for the first is worth near four Pounds an Ounce, and the Carmine, if 'tis good, worth about twenty Shillings; therefore it is better to have these in Powder, than to have them ground in Oil at the Colour-shops; for by Degrees they will dry, though in the Bladders, and you will have too much Loss from them.

The

The Method to grind these in Oil, is to put a little of either of them upon a polished Marble, and with a Drop or two of Oil mix them well with a soft bladed Knife, and lay it on your *Pallet*; but of the Ultramarine and Carmine a very little will serve, for the least Touch on the light Sides of your Drawing will give a Lustre to your Picture; and if it be Ultramarine it will be lasting, whereas I have a great deal of Reason to suspect, that the Prussian Blue will not, if it is exposed to the Weather, as I have observed in some Sign-paintings of two Years standing, and there I find that Colour to change into a dirty Yellow: But if we mix the Prussian Blue with Varnish, it will hold and last like Ultramarine; in short, the Air must be kept from it to preserve it.

If we want to grind any other Colours coarser than these in their Powder, we must have a Muller, which must be made of one of the hardest Stones we can get, and finely polished; Porphyry would be the best, made in the Shape of a Sugar-loaf, if one could get it: But for the Shape, the Sugar loaf Figure is the easiest for any one to turn with their Hand, and every Painter knows the Way. Marble is good, or any Stone that will polish; nay, even Glass, or Crystal, or any such like Thing; but, if you have a great Quantity of Colour to grind, you must consider, that you must have a large Quantity of Oil; but never so much as to overcome the Quantity of Colour. In the grinding part, you may observe, that the Colour will frequently turn from under the Muller, then with a thin Knife scrape it up, and place it under the Muller again, till 'tis as fine as you desire it: Then immediately put it into a Piece of Bladder, first having the Bladder immersed in warm Water to soften it; tie it up, and let it remain to be used as I have directed the others.

Number 3 may in its Use be explain'd thus.
 No. 3. Let that Partition be lined with Tin, or Iron tinn'd, because this is to enclose the Bladders of Oils, which you should always keep by you, as Oil of Linseed and Turpentine, Nut-oil, and burnt Oil, and in the taking of these in and out, the Apartment would be

be greasy, and stain the Wood, whereas the Tin will preserve it from any Stain from the Oils.

Number 6 is the middle of the Box, and No. 6. should be made of tinn'd Iron likewise, to take out and put in at pleasure, for 'tis to contain all the Bladders of oiled Colours; and, as some of them will be frequently used, the Reservoir for them must in Time become greasy; and over them is to be laid the *Pallet*, which, every Night after you have done your Work, should be cleaned of the Colours you have put upon it; or else covered with its Colours in Water, to keep them useful till the next Day. To keep your *Pallet* clean, rub it with a coarse Linnen cloath with Oil of Turpentine, and then rub it till 'tis dry (as one may call it) with Nut or Linseed oil.

But take what care you will of your Oil-colours in small Quantities, when they are exposed to the Air, there will be a Coat of thick hard Scale over them in a Day or two, which indeed one may take off with a Knife; but we lose much of the Colour, and some of them are very costly. When you take off the scaly Part, the rest of the Colour is fit to use; and, if it is too thick, then put a Drop or two of Linseed-oil to it, and mix it well with your tender Knife. Some People when they use Ultramarine and Carmine, because of their great Price, only put a Drop of Oil on their *Pallet*, and put as much Colour to it as they think will be enough, only working them together with a Knife; which indeed is more saving, than to mix it on the Stone.

S E C T. II. *How to use the Colours in Painting on Glass.*

As the Lines and Shades of your Picture happen to open, so you ought to dispose your Colours, that is, lay on the lighter Colours first on the light Places of your Prints, and the darker over the shaded Places; and, if you have once laid on the brighter Colours, 'tis no great matter whether the darker Sorts are laid a little over them;

them: For the first Colour laid on will hide those you lay on afterwards; as for Example:

Y E L L O W S.

The lightest Yellow may be laid on first, and the Dutch Pink will shade it.

R E D S.

The Red-lead may be laid on first, as the brightest red Colour, and to shade it with Lake or Carmine, will bring your Picture to a beautiful Scarlet, equal to any Tincture of the finest Dye of Cochineal.

B L U E S.

Lay on first the blue Bise, and shade it with Indigo; or else take Ultramarine, and lay it on in the Lights, and shade it with Indigo.

G R E E N S.

Lay on first some Verdigrease, and then the Mixture I have mentioned of that and the Dutch Pink: But you may make this Green as yellow as you please, by adding more Dutch Pink, as you see occasion.

It is to be noted, that, when any of these Colours are too strong, they may be lightened to any Degree, by mixing White with them upon your *Palet*; or you may darken them, by mixing them with the deeper Colours: But they must be well mixt with the Knife, before you use them.

When you have painted your Glass, it must stand three or four Days, before it will be dry enough to put in a Frame.



C H A P. III.

Of the making of Crayons for dry colouring.

THE Use of Crayons for dry Colours is so necessary in taking of Views and Prospects, and there are so few Crayons that are good of the Sort, that I think

think the Way of making them a necessary Article to be known to every one, who is a Lover of Drawing and Painting.

WHITE.

As for *White*, we have no occasion of any other than white soft Chalk, which should be sawed into Lengths of an Inch and half or two Inches. [There are little Saws made on purpose for such Uses about four Inches long and very thin.] When you have saw'd out your Crayons of Chalk, which should be at most a Quarter of an Inch thick, round off the Corners with a Penknife, and point them, by drawing your Penknife upwards from the Place where the Point is to be. [You ought to have a Dozen or two of these to lie in a little Case by themselves, or they will be discoloured by the other Colours.]

YELLOW Pastils, or Crayons.

Yellows come next, which should be divided into four or five Degrees of Colour.

First. Take some Grounds of Starch and Flour of Brimstone, mix them well with a Knife upon a polished Marble, so that they produce the Colour of Straw, or a Yellow as faintly will shew itself; then pour a little Milk to them, or a little pale Ale wort, till the Colour become like a Paste; then spread the Paste on a smooth piece of Chalk, with a broad Knife, till it is about the third Part of an Inch thick, and let it lie till 'tis half dry, then with a sharp Knife cut it in Lengths of an Inch and half, about the fourth Part of an Inch wide, and roll it thin between two little pieces of Board, till they are round like a Straw, and point them as I have directed for the Chalk. If you please you may use ground Chalk, instead of Grounds of Starch.

2d Yellow. It is made of yellow Oker, ground well with fair Water, and then dried and beat. Mix this with ground Chalk, in such Quantity as it will be a little deeper than the former Colour, and mix them up with pale Ale wort, in which a little white Sugar-candy may be dissolved: And make these Crayons as the former.

3d Yellow. Grind yellow Oker with Water with a Stone and Muller, and when 'tis dry beat it very fine, and make it into Pastils, or Crayons, with pale Ale-wort, or Size made with Glovers Leather, boiled in Water till it comes to a Jelly ; use it as before directed, and roll the Pastils between two Boards.

4th Yellow. Take English Pink, grind it as the former with Water, and when 'tis dry beat it fine, and mix it with a very little ground Chalk, till 'tis deeper than the former Colour ; then put to it some Wort of pale Ale, and stir all well together, and make it into Pastils, or Crayons, by rolling in the foregoing Manner.

5th Yellow. English Pink is to be alone ground as the former, and to be made in Pastils, or Crayons, by itself with pale Ale wort.

6th Yellow. Dutch Pink is to be used as the former, and mixt with pale Ale-wort, or Milk, and so rolled and dried.

7th Yellow. Orpiment is one of the most poisonous Colours that can be used ; however, it is one of the most beautiful Sort, and is next Orange colour. This must have a little ground Chalk mixt with it, well tempered together, and made up with pale Ale-wort, with a little Gum dragon dissolved in it : And roll them up into Pastils, as you did the former.

O R A N G E Colours.

1st Orange-Colour. Take yellow Orpiment, mix it with pale Ale-wort, and when it is in Paste, roll it, and make it into Pastils, or Crayons.

2d Orange-Colour. Take Orpiment and Red-lead : (but the Red-lead must be very finely ground in Water, and dried) then mix a little of this with your Orpiment, till you have the Colour you desire ; and putting to it some Ale wort, wherein some Gum-dragon has been dissolved, make it into a Paste, and roll it into Pastils, or Crayons.

3d Orange-Colour. Take English Pink, grind it well, and put to it as much Vermillion as will make it of the Colour you desire ; mix these up with Ale wort, that
has

has been boiled till 'tis more glutinous than ordinary, and make it into Pastils, as before directed.

4th Orange-Colour. Take English Pink finely ground, and put to it as much Red lead, well ground, as will make it agreeable to your Design, mix these well with Ale wort boiled to a Thickness, and make them into Crayons.

5th Orange Colour. Take some Dutch Pink, grind it well, and mix with it some Red-lead finely powdered, to the Colour you want; then make this into a Paste with Ale-wort, or Milk, and roll it up into Crayons as before directed.

Note, In the Mixture of these Colours, observe that they have as many different Shades as possible.

R E D S.

1st Red. Take Red-lead, grind it well with Water, then dry it and beat it to fine Powder, and put to it some Chalk or White lead finely ground, to brighten it; mix this with Ale-wort, wherein a little Gum-dragon has been boiled, make it into a Paste, and roll it into Crayons. In this you should make some of your Pastils deeper, others paler.

2d Red. Take Red lead, and when 'tis well ground with a Marble and Muller, make it into a Paste with Ale wort, wherein Gum dragon has been boiled.

3d Red. Red Oker wants no Preparation, but sawing, as I have directed for Chalk, in the first Article,

4th Red. Take Vermillion, grind it fine, and mix with it some fine Chalk in Powder, or White lead well pulverized; divide your Composition into three Parts, and, by adding more of the White to one than another, make three different Colours; then put to each Ale wort boiled thick, and make them severally into Paste, and so into Crayons.

5th Red. Take Vermillion well ground, and mix it with Ale wort, that has been boiled to a Thickness with Gum dragon, till it is a Paste, then roll it into Pastils.

6th Red. Take some good Lake, grind it well with Water upon a Marble, and when it is well dried and powdered, lay it in three Divisions, and mix with each

as much ground Chalk, or White-lead, as will make them of several Colours ; then make them severally into PASTE, and then into Crayons.

7th Red. Take fine Lake, and reduce it to as fine powder as you can with Water, and, when it is dry, and again finely powdered, mix it with Ale-wort, and make it into Pastils, or Crayons.

8th Red. Take Indian Red, grind it well with Water, and dry it like the other Colours ; then mix it with Ale-wort that has been boiled to a Thickness with a little Gum dragon : This alone will be a very strong Colour, but you should mix some of it with White, in two or three different Manners, to be Shades to one another.

9th Red. Take Rose-pink, and cut it into the Shape of Crayons, without any preparation. Carmine is too dear for them, for twelve penny-worth would make but a small Crayon.

PURPLES.

1st Purple. Take Rose-pink finely ground and powdered, mix it well with a little Sanders blue, till the powder appears of the Colour you want, then make it into a paste with Ale-wort thickned with Gum dragon, and roll them into the Figure of Crayons.

2d Purple. Take Lake finely ground, and washed, put to it as much blue Bise as you think proper to make it of a reddish Purple, and you should vary this in two or three Manners, each lighter than the other : In the lighter Sorts put a sufficient Quantity of Chalk, or White lead well ground, and mix them up with Ale-wort boiled to a Thickness with Gum dragon, and roll them into Pastils.

3d Purple. Take some Lake well ground, and add to it as much Prussian-blue as will make it of the Colour you desire ; mix these very well together in several parcels, making some more inclining to red than the others, and to the faintest purple of them add some ground Chalk at your pleasure, and make these severally into paste with Ale wort thickened by boiling ; so make them, after the same Manner as the former, into Pastils.

B L U E S.

B L U E S.

1st Blue. Blue Bise is the lightest blue Colour we use, and must be well ground with common Water on a fine Marble ; then let it dry, and reduce it again to powder, then lay it in four parcels, and put to three of them, in different proportions, some ground Chalk, or White-lead ; so that when they come to be mixt, every one may be lighter than the other ; mix these separately with Ale-wort that is thickened with Scraps of Glovers Leather, and when they are in a paste to your mind, make them into Crayons : And the fourth part of the blue Bise must be made up by itself, in the same Manner.

2^d Blue. Take Verditer well ground on a fine Marble, lay it in four parcels, and mix one of them purely with a thin Size, made of white Glovers Shreds and Ale-wort, and the other three parts mix with several proportions of ground Chalk, or White-lead well ground, so as to make Shades to one another ; make these into paste with Ale-wort thickened with Gum-dragon, and so into Crayons.

3^d Blue. Take some Prussian-blue, and grind it well ; then lay it in four parcels on your Marble, and mix with three of them some ground Chalk, or White lead well ground, to make them of different degrees of Colour ; and the fourth part must be alone. Make the three mixed Colours into paste with pale Ale-wort boiled till it thickens ; and the plain Colour must be made into a paste with some Ale wort boiled and thickened with white Shavings of Leather from the Glovers. Make all these into Crayons.

4th Blue. Take Rock Indigo, and grind it well with Water on a Marble, dry it and powder it again, and then divide it in parcels, as is directed above, and with two or three parts of them mix different proportions of ground Chalk, or White-lead ground, to make them paler or deeper ; and one part must be the simple Colour. Put to the mixt Colours some Ale wort thickened with boiling, and mix them to pastes, then roll them into Crayons.

As for the plain Indigo, mix it with Ale-wort thickened with Glovers Shreds of white Leather, by boiling, and make it into Pastils.

B L A C K S.

1st Black. The Black which is commonly used as a Crayon, is Charcole cut into Lengths; the softest and best is that which is made of Willow. Have at least a Dozen or two of these; for black and white are used a great deal more than any other colour.

2d Black. Take Ivory Black ground very fine with common Water, and put to it a very little ground Indigo; for a blueish Cast will enliven your Black, and help it from that Deadness, which a plain Black always carries with it.

B R O W N S.

1st Brown. Take for a light Brown, some Fullers-earth, grind it well with Water, and mix it with some ground Chalk, or White-lead, to make it in different Colours, that is, to make it lighter as you think fit; mix this up with pale Ale-wort boiled thick, and at least have four Sorts of it.

2d Brown. Take some Spanish Brown, grind it very well, and mix with it some Fullers-earth, to make it lighter, for the Spanish-brown is a dark Colour of itself; and, when you have made this Mixture, you may put to some part of it a little white Chalk ground, or White-lead, in different proportions, to have them of various Shades: These are for the lighter Browns; and mix them severally in Pastes with a light Size of Fish-glue, or Isinglass, and Water, and some of them with pale Ale wort boiled thin, or thick Water gruel boiled with Gum dragon; then make them into Pastils.

3d Brown. Take Spanish Brown well ground, and some Indian-red, mix them well together, and put to them some pale Ale-wort, till they become a Paste; you may make some of them lighter, if you will, with ground Chalk, or White-lead; and then roll them into Crayons.

G R E E N S.

GREENS.

1st Green. Take some Verdigrease, and boil it in sharp Vinegar, and add to it, when it boils, a little Tartar powdered, which will dissolve the Verdigrease so, that the Liquor will be of a fine Colour. Then set the Liquor in little Gallipots exposed to the Air, which will dry the Colour, and then it will dissolve in common Water. This may be taken with just as much warm Ale-wort as will cover it, and will dissolve the Green; then make it into Pastils with white Chalk ground, as much as you think proper.

2^d Green. Grind distilled Verdigrease with Vinegar on a Marble, wash it well with Water; the Manner of which is, to throw the Verdigrease into Water, and in half a Minute to pour off the Water into a Cup, and let it settle; then pour the Water from it, and wash it again in the same Way; when this is dry, make it into Crayons with Ale-wort.

3^d Green. Take Verdigrease, prepared as before, finely powdered, and mix it with a little Prussian Blue in several proportions: In the lightest Sorts put a little White, or the brightest Yellow, well ground, to make Varieties of Colour; mix all these with pale Ale wort boiled to a Thickness.

4th Green. Take some Indigo well ground, and some English-pink, mix them well together upon a Marble; and, when they are well powdered, make them into a Paste, and roll them up with a soft Size and Oil, till they are of the Figure of Crayons; or with pale Ale-wort, or thick Water-gruel; but when we use Water-gruel, it must be strained, and boiled with some Gum-dragon.

5th Green. Take some blue Bise ground fine. and put to it some Dutch pink well ground; mix them in Parcels; and prepare them in Shades to one another; then make them into Pastes, and roll them into Crayons. You may have five or six Varieties of these. *Note,* The Liquid which you are to use to make them into Pastils must be Ale-wort boiled a little thick.

6th Green. Grind Rock-Indigo very fine with Water on a Marble, and, when 'tis dry, beat it fine again; then lay it in parcels on the Marble, and put to some of them a little flower of Brimstone, in greater or lesser Quantities, and to others flower of Brimstone and Dutch-pink mixt, so that you may have Variety of Colours; when these different Shades are as you intend them, then make them into pastes with Ale-wort thickned by boiling with white Glovers Leather-shreds, or with a little Gum-dragon.

7th Green. Grind some Rock-Indigo with Water, and add to it, in several parcels, as much Dutch pink as you see convenient, to make your Greens of various Shades; when these are well mixt, put to them some Ale-wort thickened by boiling, and make them into Pastes, and, when they will roll, make them into Crayons.

Memorandum. The Reason why these Crayons are better than commonly those which are bought at the Shops is, because they are generally made too stiff with Gums, and so will hardly touch the Paper; but all these will work freely, and express the several Colours you desire.

We must consider, that the Reason why we make five or six Shades of each Colour is, because in this Case we cannot mix any when we use them; whereas in Oil-painting, and painting in Water colours, we may make what Mixtures we please in an instant; And when we set about any painting or drawing in Crayons, which happens to have a great Variety of Colours in it, we ought not to be without every Sort of Colour that can be thought on. *Note,* These Colours should be kept in a Box partitioned, every Sort by itself, *viz.*

The White.

Yellows. Lay the brightest Sorts in one, and the deeper Sorts in another, till you come towards the Orange-colours.

Orange-Colours. The lighter Sorts of Orange-colours in an Apartment, and the deeper in another.

Reds The paler Sorts, or Flesh-colours, in one Apartment, the brighter Reds in another, the stronger Reds in

in another, and the deepest Reds in another, every one with its proper Shades, till we come towards purple.

Purples. The paler Sorts inclining to red in one Apartment, the next Sorts, more inclining to blue, in another, with their Shades; and these which are next to blue with their Shades, in a part by themselves.

Blues should follow the purples. Put the lightest preparations in the first Apartment, the next Degree into another, a third into another, and the fourth, to the last, into others: But keep the Prussian blue quite by itself, and its Mixtures by themselves; it serves very well in this Way to supply the place of Ultramarine; and, as it is much cheaper, I forbear to mention the Use of Ultramarine blue in this Case, which is extravagant in the price; for a Crayon of it could not be made under half a Guinea: And besides, in this Way of Crayon drawing, the preparation of Prussian-blue does very well answer the same End; though that Colour will not do in Water-colours, nor even last in Oil-colours, if it comes to be exposed to the Weather; for in either Case it changes to a dirty Yellow-colour; but I find that the Crayons hold, by being imbedded as I have directed.

Greens should be divided into three or four Sorts, and with their Shades, be laid in several Apartments.

Browns should be likewise put in three or four parcels, with their proper Shades, to be laid in each Apartment of one great Box. And you should never be without Crayons of Charcole in another Case. With all these you will be compleatly furnished; and, when you go out to take any View, have one of every Sort in a little Box, divided as the foregoing, to carry in your pocket.

The paper, which you should use on this Occasion, should be *Venice* rough paper, almost like our whited brown paper, or even the whited brown paper which they sell at every Chandlers shop; the stiffer it is the better; that which they call Cap paper is the best, as I have found by Experience; for upon such the Colours easily distribute themselves. And by this Means every one may take Figures in their proper Colours as they see them; for they may match the Colours as they appear with

with the Crayons they have by them ; and, as the Crayons are dry, they will not alter their Colour, but the wetted Colours will appear deeper when they are wet, than when they are dry, which will deceive the Eye of a Beginner.

Instructions for the Use of Crayons.

Remember when you use these Crayons, that you point them from the bottom upwards, and make not the points too sharp, unless in the white Chalk, the red Oker, and the Charcole.

One may make a pretty Drawing on blue Paper with only Chalk and Charcole ; the strong Lights and the dark Shades make a fine Contrast, and a pleasant Appearance in a Drawing.



C H A P. IV.

Curious Directions for Drawing with Crayons.

TH E Manner of Drawing with Crayons is much more expeditious, where we would express the Objects we are to take in Colours, than painting in Water-colours ; for, before we use them to strike the Colours we intend, only a slight Out-line need be made, either with Chalk, Charcoal, of Red oker, of the Subject we would represent. We may bring these Drawings to a delicate Softness and fine Expression, but then they must be always kept in Books, or under Glasses of Frames, where they may not rub ; for a touch of a rude Finger, unacquainted with the performance, may change the Shades or Lights, and so alter the fine Design of the Work.

But we must first provide an indifferent coarse paper, of the Colour of whited brown paper, for the colour of the paper being a little dark, gives a better Opportunity
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of shewing the Light or white Strokes of our Crayons, and will give a good Relief to the tender parts of our Work.

Again, the little Roughness of such paper will make the Crayons of every colour express themselves much stronger, than if we were to draw with them upon smooth paper.

These Crayons of every Sort of colour, you will have occasion for, are made in Pastils, and sold by most of the most noted Colour-men in *London*; a few will serve you at first to try your Hand, and in taking off Sketches of prospects are very useful, when you are once Master of Drawing enough to take the Out-lines: for a little Box of them will serve to mark the colours which you will remark in the different parts of your prospect, without the Trouble of Water and Gum-water, which must be had if we use Water-colours, and would be troublesome to get for your Use in the Fields, where you should take these prospects from.

These Crayons being of so easy a Use may encourage us to colour our prospects after the Life, where we shall discover the different colours of the several Fields which are very different from one another, according as they happen to be cropp'd, or situated, and then the Woods which are in View commonly consist of Variety of Trees, which have every one of them their different colour, which at once we may see in our Crayons, and mark it as it happens to be upon our Drawing: But if our Wood should prove all of one Sort of Tree, we shall still find a great Variety of colours in the Trees produced by their different Situation; and if we match our Crayons well with the colours of our Trees, and other parts of the prospect, we shall learn by it what is a natural Representation of Things.

But to do this effectually, if you cannot furnish a Draught in colour at once, take the same Hour the next Day to do it in, because as the Sun happens to be at one point, at one Hour of the Day, so the next Day it will be about the same point at the same Hour; and if you was to miss that Time, the Shades of all your Objects will be altered, and your colours will be vary'd: So you

should likewise take either the Mornings or Evenings for this purpose, for then you will have strong Shades and strong Lights, which will give a pleasing Variety to your picture.. Memorandum, if you have a bright Morning or Evening, when you begin, finish your work when the Hours of your Drawing are as bright as they were at first, if you can.

For want of such Observations many a one, who is a good Draughtsman spoils a fine Drawing; he will sometimes place his Greens improperly, and give Strengths where only little Touches should be us'd. And some who are Beginners in these Affairs, will encourage a favourite colour, and neglect the proper ornamental colours.

I think I have not seen finer prospects to teach us this Art, than what are on both sides *Gaifford downs*, *Box-hill*, *Leith hill*, *Richmond-hill*, and about *High wickham*, where one has fine Vales, beautiful Hills, and delightful Woods. In the Spring and Autumn, to look on the Woods, you may almost perceive every colour in our Collection; some Trees will open with a yellowish Cast, others with a sharp blueish Green, some Brown, and others of a reddish Colour; and so in the dying away of the Leaves in Autumn, or towards the Fall of the Leaf, you will see as much Variety.

And you will find then the Fields, and all the changeable parts of the Country, of different Colours; about half a score Drawings in Crayons of these Sorts, will enliven your Imagination, and teach you the Art of colouring in the most natural, and consequently the most beautiful Manner.

But if you design principally to draw Landscapes in this Manner, I advise to make your Out-lines, with Charcoal or Black-lead, very gently touch'd, but Black-lead is the best.

When in this Way of Drawing, one has an Object where a light colour and a shaded colour should fall naturally into one another, then, when you have mark'd your paper with both, take a dry short hair'd Pencil, and brush it gently between both, 'till you have mixt them so easily together, that you cannot discern where the

the Lights and the Shades separate, or where the Light and the Shade part from one another ; but this is properly for the larger Drawings, which are to appear soft and tender.

If one wants a Pencil, of the sort I speak of, take a piece of soft whited brown paper, and roll it, or twist it up till 'tis of the Bigness of a Camel's Hair pencil, of the Size we generally use in Water-colours, and when you have rubb'd the pointed End gently on a rough piece of clean Board, or a piece of rough brown Paper, 'twill serve instead of a Pencil to * Scumble your Work or make one colour flow into another.

There remains now only to tell you how you ought, in this particular way of Drawing, to cut or point your Crayons ; take a fine Penknife, and instead of Drawing it down from the Body of the Crayon towards the Point, as one does in pointing a Black-lead Pencil, begin at the Point and draw your Knife upwards, in such a Manner, as to leave your Crayon of the same Figure you would require a Black-lead Pencil to be of when 'twas sharpen'd ; for these Crayons are hardly two Inches long, and are brittle enough : Besides, if they have any Knots in them, they will be very apt to break.

One may observe too, before we conclude this Chapter of drawing and colouring with Crayons, that all these appear immediately of the Colour one would express, whereas the Colours to be us'd with Water will be much deeper or darker when the Water is put to them, than they will prove when they are dry, which may confound a Beginner, and occasion him to make his Colour lighter, but when this comes to dry, he will see his Error.

C 2.

C H A P.

* Scumbling is rubbing in gently one Colour into another.



C H A P. V.

*Concerning the Manner of Etching, or
Hetching, to be done with Aqua-fortis on
Copper-plates.*

YOUR Copper plates must be very smooth, and polished on one Side, as they are done for the Engravers.

Then make a Varnish of Petroleum, Bees-wax and Turpentine melted together in a glazed Earthen-vessel; when it is cold, put it into a piece of Mantua Silk, and tye it up, then warm the backside of the Plate over some hot Small-coal Dust, and pass the Silk with the Mixture in it over the fore-side of the Plate, till 'tis all covered; after this, hold the varnished part of the Plate over the Smoke of a Candle, moving it backwards and forwards till 'tis all equally blacked.

You must next take your Drawing, or Print, and rub the back of it with Chalk, or red Oker; (but Chalk is the best) and when the back of this Drawing is rubbed a little with a woollen Cloth, lay the Chalk part of the Print upon the Varnish, and fixing it well, draw over all the Strokes with a blunt pointed Needle, marking it as you go along the Shades; so you will have all the Lines marked upon your Varnish.

Then provide four or five Needles of different Sizes, and with the finest make the finer Lines, and so by Degrees on to the Larger; tracing them over the Varnish upon the Lines of the Drawing, till they touch the Copper plate; and, to prevent your rubbing out any of the Chalk-lines, you must have an even piece of Wood supported by two Bits to move before you, and to rest your Hand upon; when this is done, make your Shades; and when they are done, border round the Plate some green
Wax

Wax, which, being put in warm Water, will become soft; and then pour on *Aqua-fortis* with a third part of Water; and, when you think the *Aqua-fortis* has eaten deep enough in the light part, pour off your Water, and wash the Plate with common Water; dry it, and, with a Pencil of Camel's Hair, paint over the lightest parts with common Varnish; then pour on again your *Aqua-fortis*, and let it eat into the Copper a little more, and, when you think that's enough, use the Plate as you did before, and so on to the last: Then take off your green Wax and Varnish, by warming the Plate as you did at first; and clean the Plate with a coarse piece of Linen, without any thing in it that may scratch the Plate; when this is done, you may have your Plate touched up with a Graver, or you may send it to the Rolling-press for a Proof, and then the Engraver can see best what Sharpness or Amendments ought to be made.



C H A P. VI.

Of Japanning, and Indian Varnishes.

S E C T. I. *Of Japanning Metals.*

IN japanning of Meta's we must take notice, that Steel or Iron may be japanned or varnished with any Colour. I have on-y seen it done by a young Gentleman of *Montpelier*, who performed it extremely well, and from him I had the Receipt.

The part of the Metal which we design to japan in Colours should not be polished; but the parts of the Metal, which ought to be polished, should be done first, or else, if we polish them after the painting, some of the Colour may be disturbed or taken off. The first Proof I saw of this Work was a pair Scizzars, where, from the Blades to the Rings, there were the Figures of Storks holding the Rings in their Mouths, which Rings we
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of Silver. I do not know that ~~Never~~ saw any Thing so genteel ; and the Gentleman before mentioned was kind enough to give me the following Method of doing it.

Take any Colour you have a mind to, and grind it well with Water with a Stone and Muller ; then let it dry, and ground it in a Mortar, and sift it if there is Occasion ; then, instead of Oil, mix it with white Varnish, and paint with it what you think proper.

The *Whites* are Ceruse, or Flesh white.

Yellows are Yellow-oker, English pink, and Dutch-pink.

Reds are Vermillion, Red-lead, and Lake.

Blues are blue Bise and Indigo.

Blacks are Lamp black, and Ivory or Bone black.

Greens are Verdigrease ground, or Verditer and Dutch-pink ground together.

Browns are Fullers-earth and Spanish-brown.

And *Purples* may be made between red and blue, till you see them mixed to your Mind.

SECT. II. *Of Japanning Iron, Snuff boxes, which now are generally covered with a black Varnish, that they may look like China, and gilt about the Edges.*

Take your Iron plates or Snuff boxes, and lay on the following preparation on the Top and Bottom, *viz.* White-lead ground with Water, and dried, then beaten again to fine powder, and mixed with Size ; this lay equally on the Top and Bottom of your Snuff-box, and let it dry well. Then about the Rims, or Edges of the Box, lay on some Yellow-oker with Size, and over that some Gold size ; when the first is well dried, lay on the Gold-size I have mentioned in the Colour box, you may buy it at the Colour shops ; when you lay this on, let it be near dry before you lay on your Leaf gold, that it may stick the better.

You must have a Cushion of woollen Cloth to cut your Leaf gold upon, that the pieces of Gold may be exactly to your Size, or the Shape you desire.

Then

Then take your Leaf-gold on some Cotton, and lay it on the part which is done with Gold-size, and dab it on till it lies smooth, and let all dry.

When this is done, paint what Figures you please on the upper and under Side of your Box ; upon the White-ground principally with blue Bise, mixed with white Varnish, and shaded with Indigo. The best Figures to represent China, may be taken from Tea-cups, or from Saucers, or other pieces of China-ware, which will look best if they be blue and white ; but one might paint Coats of Arms in all their Colours, or any other Devise ; and, when these are dry, wash the white part with white Varnish, and the golden part with the golden Varnish.

S E C T. III. *White Varnish, or Amber-Varnish, from a Manuscript of Mr. Boyle's.*

Take white Resin about two Drachms, melt it in a clean glazed Pipkin ; then put into it an Ounce of the whitest Amber you can get (beat finely to powder) by little and little, stirring it with a small Stick over a gentle Fire till it dissolves, pouring in now and then a little Oil of Turpentine, when you find it growing stiff ; so continue till all your Amber is melted ; but you must take care you do not set your House on fire, for the very Vapours of the Oil of Turpentine will take fire by Heat only ; but, if it happens to do so any where, put immediately a flat Board, or wet Blanket over the fiery Pot, and by keeping the Air from it you will put it out, or suffocate it : Therefore, when I make this Varnish, I use the Caution to melt my Resin in a Glass of a Cylandrick Figure in a Bed of hot Sand, after the Glass has been well annealed or warmed by degrees in the Sand, under which you must keep a gentle Fire. When you have made your Varnish, pour it into a coarse Linen-bag, and press it between two hot Boards of Oak or Iron, and use it with any of your Colours, as well as to varnish them over when they are painted : But to cover Gold, you must take the following Varnish.

You must note, that when you have varnished your Snuff-boxes with this white Varnish, you may put them in a declining Oven, which will harden the Varnish.

S E C T. IV. *Hard Varnish, that will bear the Muffle, (from a Manuscript of Mr. Boyle's) to lay over Gold, or Brass, or any other Metal that appears like Gold, to keep it from changing black, as the Bath-Metal and such others will do, when they are exposed to the Air.*

Take of Colophony, which you may buy at the Druggists, half an Ounce, melt it in a glazed Vessel; then strew in by degrees an Ounce of the Powder of Amber, stirring it all the while; and when it begins to harden, or resist the Stick, put in a little Oil of Turpentine, which will immediately soften it; then take an Ounce of Gum-copal powdered, and sprinkle that in as you did the Amber, every now and then pouring in some Oil of Turpentine, and strain the Varnish as I have directed in the foregoing. This is proper to lay upon your Gold, and the Things done with it must be put in a declining Oven three or four Days successively, and then it will resist even Fire.

S E C T. V. *To japan Brass, such as is used to gild Brass-buttons, or make them look like Gold.*

We may use this upon Gold-leaf, or upon that which is called the German Leaf-gold, or upon Brass, or upon the Bath-Metal, which are designed to imitate Gold.

Take a Quart of Spirit of Wine, and put it in a Retort-glass, then add half an Ounce of Gamboge, an Ounce of Lake, and an Ounce of Gumamassick; set this in a Sand-heat for six Days, or near the Fire, or put the Body of the Retort frequently in warm Water, shaking it twice or thrice a Day, then put it over a Pan of warm Small coal Dust; when your Metal is well cleaned, paint it over thinly with this Varnish, and it will appear like the
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the Colours of Gold : You may dry this in a declining Oven, and it will not rub off.

N. B. This is a good Varnish to mix with any Colours, that incline to Red ; and the white Varnish to mix with those Colours that are pale, or of any other Sort.



C H A P. VII.

Of Japanning upon Wood or Paper ; with Receipts for making several Sorts of Japan-Wares, either Gold, Silver, or in Colours.

IN *Japan* the People have a Method of making Bowls, Plates, and other Vessels of brown Paper, and sometimes of fine Saw dust : These Vessels are very light and very strong, when they come to be varnished ; and are in great Esteem among us. The Method of making such Utensils I shall here disclose.

Take Slips of brown Paper, boil them in common Water, mashing it with a Stick while it boils, till 'tis almost become a Paste ; then take it from the Water, and beat it well in a Mortar, till 'tis so reduced as the Rags are in a Paper-mill ; then make a strong Gum-water with Gum arabick and common Water, a Quantity sufficient to cover your Paper-paste an Inch ; put these together into a glazed Pipkin, and let them boil, stirring them very well, till you think the Paper-paste is impregnated with the Gum ; then have ready your Mould to give your Paste the Figure you design for it. The Mould is made as follows :

For Example, suppose you design to make any Thing of the Figure of a Plate, have a hard piece of Wood turned on one Side of such a Figure, and make a Hole or two in the middle quite through the Wood ; [You must observe this Mould must be like the back of a

Plate] when this is done turn another hard piece of Wood of the same Figure, about the eighth part of an Inch less than the former ; but about the Rim or Edge you may have some little Ornament carved or ingraven in the Wood. When these Moulds are made, oil them very well on the turned Sides, and continue to do so till they are well soaked with Oil, then they will be fit for Use, when you go to make your Plate of the Paper-paste, take the Mould with the Hole in it, and oil it afresh, set it even upon a strong Table, and spread over it some of your paste as equally as possible, so as to be in every part about a quarter of an Inch thick ; then oil the other Mould very well, and set it as exactly as may be on your Paste, and press it hard down ; then put a great Weight upon it, and let it remain twenty four Hours. [The Hole at the bottom is for the Water to pass through, that is pressed out of the paste ; and the oiling of the Moulds is to prevent the gummed paste from sticking to the Wood.] When you perceive the Paste dry, it will be as hard as a Board, and fit to lay a Ground upon, made with strong Size and Lamp black, letting it dry gently ; and when that is dried thoroughly, then take some Ivory black finely ground, and mix it with the following Varnish.

SECT. I. *To make the strong Japan-Varnish.*

Take half an Ounce of Colophony, melt it in a glazed Pipkin : then sprinkle into it by degrees an Ounce and half of Amber finely beaten and sifted, stirring it well, now and then adding some Spirit of Turpentine ; when this is melted, then sprinkle in an Ounce and half of Sarcacola finely beaten, stirring it all the while, and putting frequently more Spirit of Turpentine, till all is melted ; then pour it through a coarse Hair bag, placed between two hot Boards, and press it gently, till the clear is received into a glazed warm Vessel ; with this Varnish mix your ground Ivory black, and, warming first your *Paper-plate*, paint it on before a Fire in a warm Room, as equally as you can, and set it in a gentle Oven ; then the next Day put it in a hotter Oven, and the

the third Day into one very hot, and let it stand till the Oven is quite cold, and then it will be fit for any Use, either with Liquors that are cold or hot, and will never change, and 'tis with great Difficulty you can break them. I am of Opinion, that if the Moulds were cast in any hard Metal, they would do as well as if they were turned in Wood.

S E C T. II. *Of making these China-Toys of the Colour of Gold.*

Prepare your Bowls, Plates, or any other Vessel, in the same Manner as the former, or you may take fine Saw-duft, if you can have it, and dry it well; then pour on it some Turpentine, melted with an equal Quantity of Resin, and half as much Bees-wax, mix them well, and put to them your dry Saw-duft, stirring all together till the Mixture becomes thick as a Paste; then take it off the Fire, and warm your Moulds, and spread some of your Mixture on that with the Hole in the middle, as equally as possible, and press down the Mould upon it; then set it to cool, and your Vessel will be fit for painting. You may put into this when your Turpentine is melted some Sarcocolla finely powdered, to the Quantity of half the Turpentine, stirring it well, and it will harden it: And you ought to make this Composition in the open Air, for it will endanger your House.

But which ever of the Mixtures you use, if you have a mind to have them appear like Gold, paint them over with Size, and when that begins to stick a little to the Figure, lay on Leaf-gold, either *pure*, or that Sort which is brought to us from *Germany*; but the last is apt to change green, as most of the Preparations of Brass will do; such as those which are called *Bath-Metal*, and others of the like Sort, which appear like Gold when they are not fresh polished, or cleaned every Day: But as the Air coming upon them will make them alter to an ugly Colour, so I chuse Gold, which is durable, and will never change, and a much finer Colour than any of the former for a Continuance. But though the Leaf-gold, we are to use, is tender and may be subject to rub off;

off; yet the Varnish, we shall put over it, will keep it bright and entire. When the Gold is laid on, and the flying Pieces brushed off, which must be done when the Gold-size is dry, then apply the following Varnish to brighten the Gold, and preserve it from rubbing.

S E C T. III. *Varnish for Gold, or such Leaf of Metals as imitate Gold.*

Take some Colophony, melt it, and then put in two Ounces of Amber well pulverized, with some Spirit of Turpentine, as the Amber thickens, stirring it well; then put an Ounce of Gum-elemi well powdered, and some more Spirit of Turpentine, still keeping the Liquor stirring, till 'tis all well mixed: However, use as little Spirit of Turpentine as you can, because the thicker you make your Varnish for Use, the harder it will be. Do this over a Sand-heat in an open Glass, and strain it, as you are directed for the former Varnish.

Use this Varnish alone, first warming your Vessels made of the Paper-paste, and lay it on with a Painting-brush before the Fire; then harden it by degrees, at three several times, in Ovens; the first a slow Heat, the next a warmer Oven, and the third a very hot one, and your Vessels will look like polished Gold.

Note, As for those Vessels, made with Saw-dust and the Gums, you may use a Varnish for them made of the same Ingredients as above, excepting the Gum-elemi; and this will dry in the Sun, or in a very gentle Warmth.

S E C T. IV. *To make your Vessels of a red Colour with gilt Figures on them,*

Prepare your Vessels as before with *brown Paper-paste*, and when they are dry, and prepared as directed in the first, mix some Vermillion, or Red-lead with the Varnish first directed in this Chapter, and use it warm; then stove it or harden it by degrees in an Oven, and it will be extremely bright; or else lay on your first Ground with Size and Vermillion, and in proper Places stick on
with

with Gum-arabick and Water, some Figures cut out of Prints, as little Sprigs of Flowers, or such like ; and when they are dry, paint them over with Gold size, and let that remain till 'tis a little sticking to the Touch ; then lay on your Gold, and let that be well closed to the Gold size, and dried ; then, if you would shade any part of your Flower, take some Ox gall, and, with a fine Camels Hair pencil, trace over the shady Parts on the Leaf-gold, and upon that paint with deep Dutch-pink ; and, when that is dry, use your Varnish in a warm Place, (I mean that Varnish directed for the covering of Gold) and set it to harden by degrees in an Oven ; which Varnish will secure the Leaf-gold (as they call it) brought from *Germany*, from changing, by keeping the Air from it.

S E C T. V. *A Method to silver these Japan Vessels.*

When you have made your Vessels, and they are well dried, paint them over with Size and ground Chalk, or Whiting ; let them dry well, and then paint them over again with the brightest Gold size you can get ; (for there is much Difference in the Colour of it, some is almost white, and another is more yellow ; the first is proper for Silver, and the other for Gold) when this Size is almost dry, lay on your Leaf-silver, and close it well to the Size, brushing off the loose Parts, when 'tis dry, with some Cotton. (*Note*, When you lay on your Silver or Leaf-gold, keep it free from the Air ; for the least Motion of the Air will rumple your Leaves, and they will not lye smooth.) Then use the following Varnish to cover the Silver.

S E C T. VI. *To make the Varnish to cover the Silver.*

Take some fine Turpentine, and melt it ; then take off white Amber well pulverized about an Ounce an a half. put it by degrees into your glazed Pipkin to the Turpentine, and stir it well, adding sometimes some Spirit of Turpentine, till the Amber is all dissolved ; then put to it half an Ounce of Sarcocole beaten, and half

half an Ounce of Gum-clemi well levigated, pouring in at times more of the Turpentine spirit, till all is dissolved ; let your Fire be gentle, and stir the Mixture continually while it is on the Fire.

This Varnish will be white and strong as the former, and should be used warm, and is as strong as that which we lay upon Gold ; it must be hardened by degrees in an Oven, as the Gold varnish, and your Vessel will look like polished Silver.

S E C T. VII. *Varnish in Japanning on Wood, to mix with several Colours.*

You must, if you design to use Varnish to mix with Colours, take Spirit of Turpentine, and dissolve in it a little Gum-Taccamahacca over the Fire, till it is a little thickened ; use this with any Colour that has been well ground with Water, and pulverized afterwards. When your Work is done, you may, if you will, varnish over your Piece with the same Varnish directed to colour Silver ; and one might also cover Tables of Wood, as well as Tea boards and Plates, or Bowls of Wood, in the same Manner, as is mentioned for the Pastes of Paper and Saw dust.

S E C T. VIII. *Directions for imitating China, or Porcelain ware, upon Tea tables, Tea-boards, &c. upon Gold or Silver Grounds.*

Prepare your Tea tables, or any other useful Thing, as I have mentioned in the foregoing Receipts, and then mark out your Designs upon them ; make Ovals or Rounds upon them in a good Disposition, so as to be uniform, or well adapted to the purpose, that they answer one another in a regular Manner ; then paste on some Paper in proper Places, and when your paper is dry, draw your Designs upon them, and paint them with Water colours ; then with a Brush lay Gold size or Silver size on the other part, and, when that is near dry, lay on your Leaf-gold or Silver, and, when all is well dried, varnish over with the white Varnish, if it be a
Silver

Silver-ground ; or, if it is a Gold-ground, varnish with the strongest Varnish, excepting only the Ovals or Circles of Painting, for these must be done with the white Varnish, which is so transparent, that all the Painting will appear through it. If you lay on a Gold-ground, or any Colour darker than that, then let your Paintings be blue and white ; or, if it is Silver or Light ground, then use the most fiery Colours in your Paintings.

SECT. IX. *The Method of Glazing Prints with white Varnish, so as to bear Water, and the Polish.*

It is best in this Way, first to paste your Print on a Board, or a Piece of Shock-cloth strained on a Frame ; to do this well, prepare some stiff Starch, and with a Sponge, dipt in Water or thin Starch, wet the back of your Print, and, if your design to lay it on a Board, dip a large Brush in the thick Starch, and brush it over the Board as even as possible, and let it dry ; then a second Time repeat the same Work, and so continue till the Veins or Grain of the Wood is quite filled : In the last Operation, when the Starch is just laid on, lay upon it your wet Print as equally as possible, so that there appear no Bubbles in it, press it close every where till it lies smooth, and so let it dry : In this Operation your Hands must be very clean, or else you will foil the Print ; in about twenty four Hours it will be dry enough to varnish with the following, *viz.*

White Varnish for Prints.

Take of *Ithyocolla*, or *Isinglass*, or *Fish-glue*, as some call it, four Ounces, and pull it into small Pieces, seethe this slowly in a Quart of Brandy, or strong Spirits, in a glazed Pipkin ; and when, by taking out a little, you find it will make a strong Glue, by being a little exposed to the Air, it will do for your purpose ; but be sure to make it as strong as you can ; and, while it is warm, with a large Brush, wash over the Print as quick as possible, and as smooth as may be ; let this stand a Day, and then brush it over again with the same Varnish, or Glue, and let

let it dry very well; then brush it over with white Varnish, at such a Distance from the Fire that it may not be too hot, or else it will blister, and do this two or three times over; then set it by for a Day or two, and brush it over with white Varnish again three or four times, and let it stand a Day or two; then varnish it a third Time with two or three Passages of the Brush, and in three or four Days polish it with a soft Linnen-cloth and some fine Tripoli, rubbing it very gently, till it remains as smooth as possible, and clear it with Flour and Oil; it will then appear as bright as Chrystal; and, if it should at any time be annoyed by Flies, you may wash it with a Sponge and Water, which will clean it. *Note*, for common Use, some first dissolve the Linglase in warm Water, lest it should take fire.

The white Varnish.

Take Gum sandarick of the clearest and whitest Sort one Pound, Gum-mastick of the clearest sort one Ounce,, Gum sarcacolla the whitest one Ounce and half, Venice-Turpentine three Ounces, Benzoin the clearest half an Ounce, white Resin half an Ounce, Gum animæ an Ounce and half, Gum-elemi 3 Ounces; these must be dissolved and mixt in the following Manner.

Put your Sarcacolla, and Resin into a little more Spirits than will cover them to dissolve; then put your Gum-animæ, Benzoin, and Venice Turpentine into a Glass, or glazed Vessel, and pour on as much Spirit as will cover them an Inch, then provide a glazed Vessel, or Glass, for your Gum mastick and Sandarick, and pour on them strong Spirits, enough to cover them about an Inch, to dissolve them rightly; then, in a distinct Vessel, of the same Sort as before, put your Gum elemi, and cover it with Spirits to dissolve. [In this Process, you need only pulverize the Gums Animæ, Sarcacolla and Benzoin, and you may break the Resin a little.] While these are dissolving, for three or four Days, shake the Bottles twice or three each Day, then put all these together in a glazed Vessel gently warm'd, stirring them well, and strain the Liquor and Gums gently, beginning with the Gums, through a Linnen-cloth; [This will prevent any Dirt getting into your Varnish] then put it into a Bottle, and let

let it stand a Week before you use it, and pour off as much of the clear only, as you think you shall want for present Use. Take Care of Fire.

To paste Prints upon Cloth for Varnishing.

If you put your Print upon Shock-cloth well strained in a Frame, brush over your Cloth with strong Paste, made with Flour and Water, and immediately brush over the back of your Print with well prepared Starch ; and then as readily brush the Cloth over again with the same Starch, and lay on your Print as equally as possible, without letting any Bubbles or Blisters appear in the Paper ; but you must observe, that, when you lay on your paper upon the Cloth, as both the Cloth and the paper are then wet, however close you lay the Paper to the Cloth, they will both together appear flagging, and unstrained, yet, as soon as they are dry, all will be smooth, as either was at the first : Let them remain so in a dry warm Place for a Day or two, and then varnish your Print, as before directed, with Glue made of Ichthyocolin, and then with the white Varnish.

With this Varnish you may mix up any Colour, that has been ground dry, upon a Marble, and paint with it upon any Figure you have drawn, or upon any Print you have pasted upon your work ; but the varnished Colours should be chiefly put upon the shady parts. To know what Colours are proper Shades to one another, see the Chapter for making of Crayons.

Varnish made with Seed-Lacca.

Put a Quart of strong Spirit into a large Glass vessel, and put to it six Ounces of Seed-lacca ; let these stand together two Days, shaking them often ; then take a Jelly bag, or a Flannel bag made like what is called Hippocrates's Sleeve, and pass it through, letting the Liquor drop into a Receiver, and squeezing the Gums every now and then ; when the Varnish is almost out of the Bag, add more, and press it gently, till all is strained, and the Dregs remain dry ; [Take care you do not put

put this Drofs into the Fire, for fear you fet your Houfe in a Flame] then put it in Bottles, and keep them clofe ftopt, fetting it by till you perceive all the thick parts fettled to the Bottom, which will be in three or four Days, then pour off the clear into a fresh Bottle, and 'twill be fit for Ufe.

As for the Varnish made of Shell-lacca, 'tis not of any great Service, though often recommended, for it will not bear the Polish.

When you lay on your Varnishes, take the following Method: If you varnish Wood, let your Wood be very smooth, clofe grained, free from Greafe, and rubbed with Rufhes.

2dly, Lay on your Colour as smooth as poffible, and if the Varnish has any Blisters in it, take them off by a Polish with Rufhes.

3dly, When you varnish, keep your Work warm but not too hot.

4thly, In laying on of your Varnish, begin in the middle, and ftroke the Brush to the Outside, then to another extreme Part, and fo on till all is covered; for the Brush if you was to begin at the Edges would leave Blots there, and make the Work unequal.

5thly, In fine Works, ufe the fineft Tripoli to polish; do not polish your Work at one Time, but, after the firft polishing, let it dry two or three Days, and polish again for the laft Time.

6thly, In the firft polishing you muft ufe a good deal of Tripoli, but in the next a very little will ferve; wash off your Tripoli with a Sponge and Water; dry your Varnish with a dry Linnen rag, and clear your Work with Oil, Whiting, and Lamp-black.

S E C T. X. *To take off the Figure from any Piece of China-Ware, though the Person has not been acquainted with Drawing.*

When you have any Figures to your liking upon any China difh, Cup, Plate, or fuch like, you muft lay a Piece of oiled Paper over them, fo as to hold the Piece fteady, till you can trace out the Lines of the Figures; then

then lay the oiled Paper on a Paper blacked on one side, and the blacked Paper on a clean Paper ; then trace the Lines with a Pen, or blunted Point of a Needle, till the Lines are all impressed on the white Paper, and draw them over with a black Lead pencil, and mark the Shades, where they separate from the light Parts of the Colour, that so you may lay on your Colours as you see them painted on the China-ware ; then cut out your Figures close to the Out lines, and fix them upon your Ground of Whiting and Size, or Size with ground Chalk, with thick Gum arabick and Water, and, when they are quite dry, paint them, the lighter parts in water-colours, and the shady parts with Varnish mixed with the darker Colours ; when these are dry, wash all over with the white Varnish before a Fire, but not so hot as to make the Varnish rise in Blisters ; when the Varnish is dry, lacker it again with the same Varnish, and repeat it a third Time ; then scrape some Tripoli very fine, and with a soft Rag, dipt in Water, take up a little of the Tripoli at a Time, and polish it, by gentle rubbing, till 'tis smooth, then wash off the Tripoli with a soft Sponge and Water, and then with a dry fine Cloth, wipe off the Tripoli, and, when that is dry, clean it with Whiting and Oil, if it is a white Varnish ; or, with Oil and Lamp black, where the Varnish is black.

But the common Way is to cut out Prints, and paste them on such Parts as we think fit, and then colour them with Water-colours, and varnish them with white Varnish. 'Tis an easy Way of Painting, because the Shades of the Prints, when you lay on a transparent Water colour, will give the Light and Shade that Colour to your purpose, without using a dark and light Colour.

SECT. XI. *Some remarkable Directions in colouring of Draughts or Prints in Japanning, as Flowers, Birds, Fruits, &c.*

If you have Prints or Drawings in black and white of Flowers ; if the Centre of the Flower is rising, just touch

touch the Edges of the Lights with a thin Tincture of Gamboge, and lay on some Dutch pink, or Gall-stone, over the Shades, so as to run into the Lights a very little. I say this because the Thrums in the middle of Flowers are generally Yellow, but if of any other Colour, as by Observation I find they are sometimes blue, sometimes more light, and sometimes darker, then touch on the Verges of the Lights a little Ultramarine-blue, and over the Shades either some Sanders blue. to run a very little into the Ultramarine, or else shade with Indigo; and, some of the white of the Print being left void of Colour, will then give a Life and Spirit to the Colours so disposed.

All Flowers should be tenderly touched in the Lights, just to give a little Glare into the light Parts of the Colour you would give to the Flower-Leaves; and, if you have a natural Flower to paint by, you will presently see that on the shady Side you must lay on the most shady part, such a Colour as will force the rest to appear forward; but do not dawb over the Shades with too heavy a Colour, let it be such as may be transparent, if possible, and scumble it into the light Colour, which was laid on before; use your Pencil lightly on this Occasion, with a very little Gum-water in it, and use it before the Colours are quite dry.

In the Painting of the Leaves of Herbs or Plants, we ought to have regard to the Colours of the Greens; the brightest is the Verdigrease green, described in *my former Book relating to Painting in Water-colours*; we should touch that Colour a little into the light Parts of the Leaf, from the Place where the lighter Parts of the Shades end; and then lay on some Sap green on the shady Parts, so as to unite with the Verdigrease-green; and if the natural Leaf should be of a darkish Colour, touch the lighter Sides of the Leaves with a little Verdigrease-green, and Dutch yellow Pink mixt together, or with a Tincture of French berries, but so as to let the Verdigrease shine more than the Pink, and by Degrees shade it with Pink,

The Leaving the Lights, when we colour a Print, has two Advantages, *viz.*

If we leave the Lights on this Occasion, the whiteness of the Paper serves instead of the Use of white Paint, which is an heavy Colour, and would rather confound the Edges of the Colours, which I have prescribed to be laid on, than do them any service; but the Colours, which I have directed where there is no white laid on, will agreeably shine into the white of the Paper.

I am more particular in this, because several, if they see a Flower of a blue Colour, will lay it all over with one Colour, though it is thick enough to hide both the Lights and the Shades, and then it remains like a penny Picture, where there is nothing to be seen but a Jargon of Reds, Blues, and Yellows.

With a little Practice of what I direct, you will soon see the good Effect of laying on Colours for this Use; though the dawbing of Prints in the common Manner may please the Ignorant, when every one of Taste will soon discover the Impertinence.

In a Word, when you are about such Pieces of Work, scumble the Lights into the Shades of every Colour, and save the Middle of the Lights open on the Papers, for, as the Paper is white of itself, it makes a Light.



C H A P. VIII.

To melt Amber, and cast it into any Figure with Flies, or any small Animals in it, as we see in the valuable Pieces of Amber sold at great Prices. From Mr. Boyle.

TAKE Turpentine, and melt it in a Glass in a strong Sand-heat, where the Fire may be raised at Discretion, then have prepared three Ounces of Amber, either

either of the whitest or yellow sort ; [If you want your Amber white, pick out the clearest white pieces, or if yellow, the clearest of that sort.] levigate either of them ; and when your Turpentine is melted, sprinkle the powdered Amber in, keeping it stirring with a Piece of Fir-wood, till you find no Resistance ; then, if you find your Melting to resist the Stick, drop in by degrees a little Venice turpentine, and keep it still stirring, till all your powdered Amber is dissolved, and is thick enough to pour into Moulds ; and when 'tis cool, you will have a Figure, or the Medal you propose, filled with it, and remain as hard as Amber itself, with all the same Qualities that Amber commonly shew us.



Arts COMPANION

PART II.

OR THE

A R T

OF

Drawing *and* Painting

IN

WATER-COLOURS.

WHEREBY

A Stranger to those ARTS may be immediately render'd capable of Delineating any View or Prospect with the utmost Exactness; of Colouring any Print or Drawing in the most beautiful Manner; and of taking off MEDALS instantly, by various Ways, never before made publick: Intermix'd with several curious Receipts for the Use of Painters, Statuaries, Founders, &c.

WITH

INSTRUCTIONS for making Transparent Colours of every Sort; partly from some curious Personages in *Holland, France and Italy*; but chiefly from a Manuscript of the Great Mr. Boyle; particularly a Receipt of that Gentleman's, for making a Blue Colour equal to Ultramarine.

The FIFTH EDITION.

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PREFACE.

THE following Papers are the Effect of some Years Study and Labour, collected in my Travels, and at length put together, at the Instance of a noble Friend, for his Instruction in the Art of Drawing, and Painting in Water colours. Among other Particulars which they contain, are several Receipts for making and preparing of Colours, from a Manuscript of the late famous Mr. Boyle, which has never yet appear'd in Publick, and was communicated to me by the late Lord Carleton. As I have experienc'd what is related in this Treat to be curious and extraordinary, I make no Apology for offering it to the View of the World: And on my own Part, I shall think my Time well spent, if my Readers reap any Delight or Advantage from what I here publish from my own Observation; since I can assure them, that it was calculated for the Entertainment and Diversion of those who have a Genius for such pleasant Amusements, as well as for the Improvement of those who have already made some Progress in the delightful Arts above-mentioned.



THE
ART
OF
Drawing *and* Painting
IN
WATER-COLOURS.



CHAP. I.

*Rules for Drawing any Object in its Outlines,
as exact as the Life or Nature.*






TAKE a Sheet of the thinnest, or whitest brown Paper, and brush it over with Oil of Turpentine, which will immediately render it transparent, and then put the Paper to dry in the Air; when 'tis dry, strain it upon a Frame, and fix it against any Object you design to draw; as an House, or Hill, or Tree, &c. then just before it, place a piece of Wood with an Hole in it, fit for one Eye to look through; and as you meet any Out-lines of the Object you desire, upon the transparent Paper trace them over with a Pencil; so will you be sure that you cannot err; for there will be nothing but just Proportion, and a true Representation of Nature.

To make this still of more Elegancy, observe the Tracing of your Draughts where the Shades are, and mark them with your Pencil; for all the Art in the World can never dispose the Shades so regularly as one
Part II. D may

may touch by this Method : But the Shades must be done quickly after the Out lines are drawn, and not at different Times, because every Instant the Sun changes them.

In this too observe, that in certain Objects you will have fainter, stronger, and yet more dark Shades, and in your Remarks of them take such Memorandums, as may direct you how to finish them, with *Indian Ink*, or other Colour, when you sit down to compleat your Work.

The best Way that I know, is to prepare three Shells or Gallipots of *Indian Ink* mix'd with common Water, before you attempt to trace out your Object, viz. one of a very faint Black, the next of a middling Black, and the other of an intense Black, Number them 1, 2, 3, from the lightest to the darkest; and as you make your Observations of the Shades on your Object, mark upon your Draught the same Numbers as they happen to appear, so that afterwards you may finish with Certainty.

Again, it is necessary in the Drawing of any thing after this Manner. to observe, that the Lines on the shady Side should be thick or bold, and those on the lighter Sides should be thinner or finer, in proportion to the Light that falls upon them. As for Example : In the darkest part a Line may be of this Thickness ;  in the next dark Part somewhat thinner  and in the other thus  unless in Things at a great Distance, hardly to be understood, or so faint  as hardly to be perceived, thus ;  a mere Shadow as it were.

Some have been guilty of a great Fault, though they have taken the Out lines very exact, to make all their Lines of an equal thickness.

If an Object be represented, we'll suppose two Miles off, and the Drawing be as strong in that Part of the Picture, as if it was next the Eye, or not ten or twenty Feet from the Draughtsman, it would not appear pleasant or natural to the Eye. We must not express a Man with Buttons on his Coat at two Miles Distance, no more than we must have them omitted in a Person so near the Eye as ten or twenty Feet : Though this has
inad.

inadvertently been done by some who have passed for great Men. And the Shades in those distant Appearances must be in proportion to the Strength of the Objects, as they appear to us, *i. e.* imperfect. Three or four well-directed Touches of the Pencil, on the shady Side, will represent a Figure at the Distance we can discern it, as lively as some Hundreds will of the same Figure near the Eye.

But the transparent Paper I speak of, is of another Use; for, if we lay it upon any Picture, or Print, in a loose Sheet, you will see all the Lines through it, and may then draw or copy it with the greatest Pleasure. You will then, if the Print or Picture be done by a good Master, see which Lines are strong, and which are tender and soft: Imitate them.

There is yet another Way to take Views and Landscapes, which some prefer to the transparent Paper; that is, either with white or black Tiffany, or Lawn, strain'd upon a Frame, and us'd in the same Manner as the Paper; excepting that the Black-lead Pencil is used to the Paper; on the white Tiffany, and on the Lawn, we use Charcoal finely poinied, and very soft; but on the black Tiffany we use white Chalk of the tenderest sort.



C H A P. II.

How to bring these Drawings to Use; and to copy from Prints, Paintings, &c.

IF we make a Drawing upon transparent Paper, to take a Drawing from it regularly, get a piece of Paper of the same Size, and rub on one side of it some Powder of Black lead, till 'tis well and equally black'd, and so well rubb'd, that a touch of a Finger will hardly be tinged with it.

Then take the Drawing you have made, or Print, and lay the black'd Paper under it, with the black side down-

wards, upon a piece of white Paper, and pin the three together in two or three Places; take then a Pin or Needle a little blunt at the Point, and trace it over the Out-lines of your Picture; which, with a little pressing, will direct the black'd Paper to impress the undermost white Paper, so as to receive every stroke you draw.

When this is done, you must with your Black-lead Pencil correct what Errors you find, and slightly clean the Draught new made with some stale Bread-Crums. The Black-lead Pencil is so hard to be found tolerable, that I know not above one Place, where we can get one that will do the Service we require. If we find a good piece of Lead in the beginning, when we have used an Inch or two, the rest generally proves hard, gritty, and full of Knots.

The best I have met with are commonly sold by Joy-ners, from some of these one may have them of soft or hard Lead, and use them till they are reduced to two or three Inches 'Tis a great pleasure to a Draughtsman to work with a good Pencil, and as great a Plague to have a bad one.

So the Camel's Hair Brushes are generally very bad; they are indeed cheap enough to buy them in common; but if one would have the best, which should be full of Hair, the Price ought to be accordingly, as they can be made to hold a Quantity of Colour, and be brought to fine Points: 'Tis better to give six pence or a shilling for a Pencil, than to have a dozen for a groat.

As for the Draughts drawn on Tiffany or Lawn, lay them only on Paper, *i. e.* that which is drawn with Charcoal upon white Paper, and that drawn with Chalk on black or blue Paper; then, giving each of them a Knock or two with an Hammer, the Charcoal or the Chalk will fall through them, upon the Papers, directly in the Lines they were drawn, and give you the true Representation of the Object you drew from the Life: Upon the black Paper you will see it in white Lines, and so the contrary,

Then

Then strengthen these Shadows of Drawings with your Black lead Pencil, or Chalk, or red Oker, on the Sheets of Paper, where they have made the Marks; otherwise, the Lines would easily be rubbed out. But take care, as I have observed before, that this Amendment be made suddenly; for these tender Draughts are soon vanished, if one does not take care to strengthen them immediately: Begin first at the bottom of the Drawing.

Another Way is to take a thin piece of Paper, and hold it against a Glass-Window, principally at such a Window as is sash'd; for the Interruptions of the Lead in the smaller glazed Windows, will hinder part of this Prospect; the Point is, draw what you see from the Glass, and then the Black-lead paper is to be used, as directed before.

There is another Way still, which may be more easy to the Hand or Arm of a Person not accustomed to drawing upon a Paper or Lawn placed upright, which is by the Use of a portable *Camera Oscura*; though to help the first, one may hold a Baguette, or such a Stick in the Left-hand, as the Oil painters use to rest the Right-hand upon; or have some other Rest made for the Right-hand, as may be screwed up and down at one's pleasure. But there is this Difference still between drawing a piece of Perspective, or View, on a transparent Paper or Lawn placed upright against any Object, that such a piece will take in more of the View or Object, and from a greater Distance than the portable *Camera Oscura* will. However, as the portable *Camera* will at first be most easy to the Arm for the Beginner, by Reason the Objects appear upon an Horizontal plane, such as a Table, the Hand will have a proper Rest, and more readily follow the Lines represented on the Plane with that Exactness. Indeed such a portable *Camera*, as I mention, is of some Expence, and to such as can afford it, they may have them at any price, from thirty Shillings to five Pounds a piece, according as they bespeak them, at the Mathematical Instrument-maker's.

What will make the Difference in the prices, will be the Largeness of the Sizes of the Glasses, which lye horizontally, and receive the Objects which we are to trace out with our Pencil: The smaller of these Glasses may be perhaps four Inches square, and the larger fifteen Inches. On such Glasses you will meet the exact Representation (smaller or larger, according to the bigness of the Machines) of the Objects we point or direct them to, each one adorned with the natural Colours agreeable to the point of Distance; stronger nearer the Eye, and gradually declining, as the Objects are more remote from it: The Shades of the several Colours are in this Way expressed in a very lively Manner. A few Lessons, with good Consideration, will be of good Information, not only to a Beginner, but to a Master of the Pencil.

But still, to advance the Knowledge and Use of this portable *Camera*, I suppose, that instead of the Glasses, which receive the Objects I speak of, there should be placed Frames of transparent paper, to receive the Objects we have a mind to take, upon which one may use the Pencil still with greater Freedom. One may have a Dozen or two with each *Camera*; or one Frame will serve as for many papers as we please to strain upon it, if one has patience to paste them on.

There is another way of drawing Objects in the *Camera Obscura* way, which is by making a Room as dark as may be, only leaving an Hole in one of the Window-shutters, as low as possible, to receive an Ox-Eye Glass, as they call it, which is sold by the Mathematical Instrument-makers. This turns in a Socket, so as to direct every Object, within a certain Reach, to a Sheet of paper, placed at a proper distance within the Room, to receive those Objects; upon which paper, you may draw them in great perfection; but they all appear revers'd, or the wrong End upwards: However, they are in as exact proportion and beauty, as those represented in the former. In this Case, 'tis not however more difficult to draw, or rather copy the Objects, though they are revers'd, than to draw or copy the several Things which we see upright, on the Frames of transparent Paper, Lawn, or Tiffany; for to trace Lines, will be as easily done

done one way as the other : And though the Objects, falling on the Sheet of paper, will, when we are drawing them, be revers'd, 'tis but turning the Sheet of paper upside down when they are done, and our Drawing will be right to the Eye.

When we shew this by way of Curiosity, to those who are unacquainted with the Reasons why the Images represented on the Sheet of paper appear upside down, it would not have so desirable an Effect, as if they could be viewed in their natural Situation : But to obviate this Difficulty, let the Sheet of Paper, which is to receive the Objects, be placed against the back of a Chair, and let them look on the several Objects, represented on the Paper, over the back of the Chair, which will set them upright to the Eye. This way in bringing them to rights, is thought on by very few, though at the first Proof every one will wonder that he did not find it out sooner.

Thus far is shewed, how any one may copy either a Print, Drawing, or piece of Painting, or even make an exact Representation from the Life. But I must yet add, concerning the Taking off of Prints or Drawings, a Method or two which are easy and diverting, not before mentioned. One is, prick with a Pin any Outlines of a Print or Drawing one has a mind to copy, and then, laying the said Picture on a Sheet of paper, take a Powder-puff, or a Tuft of Cotton, dipping it now and then in Charcoal-dust, or red Chalk-dust, and beat it over the prick'd Lines, through the picture, renewing it with Dust frequently by dipping, and then you will have full Directions marked on your Cloth, or Paper, sufficient to finish a just Drawing.

N. B. Such a prick'd piece of Work will give many hundred Proofs of its Use. Though it spoil the print or picture, it saves a vast deal of Trouble to the Painter on the drawing part.

Another way there is to make an Impression from the print, which shall give a just Copy of it : This is of great Use, when we want to carry every Stroke of the Engraver along with us. It will indeed ~~fully~~ ^{soil} the print a little, though very little, if you are careful ; and this Method will

will perhaps cost you two minutes Time, when the drawing of it with every Stroke the Engraver has made, would keep you busy a Month.

For this take some soft Soap, either white, or of the green sort ; but, for my part, I always used the green Soap ; mix this with Water near an equal Quantity, till 'tis near the Consistence of a Jelly : Rub some of this mixture on the print, and gently wet the paper, you would have to receive the Impression from it, with a wet Sponge ; then lay it on the print, and cover all with two or three other pieces of dry paper, and rub it very hard all over with any Thing that is smooth and polished, and the wetted paper will have upon it the reverse of the print you rubbed it upon, with every distinct Line in the Original, if you have been careful to rub it equally.



C H A P. III.

Secrets for Copying of Drawings, &c. continued.

To take a Drawing with fixt Ink.

ONE Way is to take a thin Sheet of paper, and rub it all over with fresh Butter, as equally as possible ; then dry it well by the Fire and rub the butter'd Side with Carmine, till 'tis all equally colour'd, or else rub it over with Lamp black, or Black-lead powder, or with blue Bise finely ground ; take care in the rubbing on any of these that the Colour will not come off by a very slight Touch of the Finger, and they are then fit for your work.

When you have chosen a Print, or Design, that you would copy, lay the colour'd Side of your butter'd paper upon a piece of clean paper, and your print upon the butter'd paper, and then with a fine Pen or Needle, blunted

blunted a very little at the point, trace the Out-lines of your Drawing carefully, and you will have a good Copy of it upon your white paper, which may be touched up afterwards by Crayons of the like Colour.

A red Ink for making an Impression of a Print.

One may likewise use the following Method for taking off or making a Copy from any print ; which is, to mix some Vermillion, finely ground, with Linseed oyl, but so liquid that it will run or flow in a pen ; with this trace the Lines of your print, and as soon as all is done, then with a Sponge and Water wet the backside of the print, and turn the printed side down on a piece of white paper, so as to lye smooth ; then lay over that a piece of dry paper, and press it hard in every part, and the lower white paper will receive the Impression : But if you have a Linnen-press, 'tis better to put your papers between two of the wooden Leaves, and skrew the press as tight as may be, for you will then have a fine Impression.

Taking Draughts with red loose Ink.

You may likewise take some Vermillion finely ground, and mix it with fair Water in a Gallipot, with some Cotton, and it will run very freely in the Pen, so that one may make the finest strokes we desire ; then, with this mixture draw over all the strokes of your print, imitating both the finer and stronger Lines : When all is done, then with a Sponge dipt in Gum-water, with a clean white Paper, and while it is wet, turn the Print upon it, and pressing it well, take off the print, and all the Strokes will remain on the clean Paper, and as soon as 'tis dry the Vermillion will be fixt to it.

This sort of Ink is what a famous Writing-master used, when he had a Book of Writing engraving for him ; he writ with this, and, having his Copper-plate covered with white Bees-wax, or white Ground, he turn'd the written side down on the waxt side of the plate, and rubbing it very equally, the Impression will be upon the Wax.

Taking Draughts with blue loose Ink.

You may likewise make such a sort of Ink of blu Bice and common Water, which will run very finely in a Pen, and serve for the same Use as the above Ink.

To take off a Drawing in a standing red Colour by Tracing.

Take Vermillion finely ground, and mix it with a little fresh Butter, then rub a clean Sheet of Paper with it on one side, till it will bear a slight Touch of the Finger, without leaving the Paper too freely; then use this coloured Paper, by laying the colour'd side upon a clean Paper; and upon the colour'd Paper lay on your Print, and trace every Line you think proper, as directed before in Tracing; but be sure you pin the three Papers together at the Corners to prevent their slipping; for if any one should slip, your work will be spoil'd, or some one or other may inadvertently take up the Print when you have half traced it, and then 'tis impossible you can ever place it right again; so that your Labour will be all lost. This Impression made by Tracing will hold without rubbing. In Tracing, the Quills taken from a Swallow's Wing are very good, after they are thoroughly dry.

If one has Carmine enough by one, he might mix it with a little fresh Butter, and colour a Paper with it as before directed, and then your Drawing will be of a more beautiful Colour; or, if we would have the Drawing blue, we may colour a Paper with blue Bice and Butter.

A speedy Way of Printing the Leaf of any Tree or Herb, as exact as Nature it self.

Take the Leaf of any Plant you desire, and rub the Veins on the Back-side a little, with a piece of Ivory, or a Dog's Tooth, to bruise them a little, then rub it gently with a piece of Woollen Cloth dipt slightly in Oyl of Linseed; when you have done this every where on your Leaf, put the oyl'd side on a piece of white Paper, and pressing it equally in every part, the Paper will remain a perfect Impression of it, which may be afterwards coloured; 'tis soon done, and is useful to such as would remember Plants.

Another

Another Way of Printing the Leaves of Plants, so that the Impression shall appear as black as if it had been done in a Printing press.

Take any Leaf, and when there is no Wet upon it, take such a Ball as they use at the Printers for laying the Ink upon the Letters ; and when your Ball is equally covered with Printer's Ink, strike it gently four or five times on the back of the Leaf, till all the Veins are black'd with the Ink ; then lay your Leaf on a Trencher or small Board, with the black side upwards, and then wet a piece of white Paper to be somewhat more than moist, and lay it on your Leaf, and upon that lay a smooth Trencher, pressing it very hard, but not so much as to break the fine Fibres of the Leaf ; by this Means you will have a fine Impression.

But it would be still more easily done, if you could get a piece of Wood, made like a Cylinder, about a Foot long, and at Inch and a half Diameter, and cover the middle part of it about six or eight Inches long, with Woollen-cloth rolled three or four times about.

With this Roller roll the white Paper that lyes upon your Leaf backwards and forwards four or five times, and you will have a very curious Impression.

The Necessaries for this Work are a Gallipot of Printers Ink, a couple of small Balls, such as the Printers use, to lay the Ink equally on the Leaf, and the Roller I mention. But where printers Ink cannot be got, then take the following Method.

To take the Impression of any Leaf, as certain as the former Way, only using such Things as may be had in any part of England.

When you have no Printers Ink, rub the back of a Leaf, as before mentioned, with *Linseed oyl burnt*, and then, strewing some Powder of black Lead, or for want of that, some Charcoal or Small coal Dust, or the Powder of burnt Cork, equally, upon a smooth Board just to cover it, stroke it over smoothly with the Blade of a Knife.



C H A P. IV.

Of Taking-off Medals instantly, by various Ways not known.

IT may be useful to some People to learn another Way of preserving to themselves good Specimens, and fine Designs of Medals, that is, such as may serve to draw from at any time; and many thousands of these Specimens may be taken in one Day, at a trifling Expence.

One Method is, to take Ichthyocolla, *i. e.* Isinglass, which is sold at the Druggists, and is call'd likewise Fish-glue; it is made up in Rolls twisted in the Form of a Figure of eight. This being broken to pieces, take about an Ounce, and dissolve it in Water enough to cover it, over the Fire, stirring it gently till all is dissolved; then, with a Camel's Hair brush, stroke some of this Glue over the Medals you want to take off; after the Medals are laid as horizontally as possible, and when all the Surface is cover'd, let them lie till the Glue is harden'd; and then with the point of a fine Needle, or Pin, raise the Edge of the Glue from each Medal, and the whole Impression in Glue will fly off as hard as Horn, with all the fine Sharpness of the Medal, as if it was struck. This Glue may be made of any Colour we please, by mixing the Colour we want in the Water we melt the Glue in. Five hundred of these Impressions in Glue will not weigh above half an Ounce, if each Medal be an Inch Diameter. These must be dry'd immediately, not in an hot Sun, nor in a damp place, but regularly.

If we use the Isinglass without any Colour mix'd with the Water, we may, when we take our Copies from the Medals, breathe gently on the concave side of them, which in some measure will moisten our Medal, and then lay it upon a piece of the thickest Sort of Leaf-gold, which will stick to it, and, by shining through the Isinglass, will appear like a Gold Medal; and if we
would

would imitate a Copper Medal, we should mix Carmine with the Water we dissolve our Iſinglaſs in.

When I preſcribe Water for this End, it is becauſe it will do well, and may be had any where; but Brandy, or Spirits of Wine, will give Glue a much greater Strength, ſo as to be leſs ſubject to ſoften by damp Air. When I mention this, 'tis from an Experiment I made for Preſerving the natural Colour of Flowers ſeveral Years, which may be uſeful to the Curious, who uſe this Glue on any Occaſion, and is as follows.

To preſerve the Leaves of Tulips. Make ſome Card-paper into the Figure of Dripping-pans, and, with a ſtrong mixture of Gum Arabick and water, fix them to the Card; then pour on gently warm ſome of the Iſinglaſs prepared with Brandy, or Spirits, 'till the Leaf is quite cover'd, and in an Hour or two the Liquor will become hard, and, by keeping the Air from the Flower, will preſerve it in all its Colours for ſeveral Years. The ſame may be done with the Bloſſoms of the Auricula, which will preſerve all their Colours as if they were painted.

I Shall now mention the manner of taking off Medals of the largeſt ſort, which will ſtill preſerve to us the Delineations of many curious pieces, and valuable deſigns. For this Uſe, with a Tuft of fine Cotton a little greaſed with Sallad oyl, rub the Medals gently over, and melt ſome Stone Brimſtone, enough to cover the Medal half an Inch thick; then put an Hoop of ſtiff Paper round the Edge of the Medal, and when the Brimſtone is melted, and not too hot, pour it on the Medal, and as ſoon as it is fixed and hardened, if you untie the Hoop, the Impreſſion on the Brimſtone comes clean from the Medal; which will produce a ſharp and correct mould to caſt another from in Plaiſter of *Paris*. But this ſhould not be uſed on Silver Medals, becauſe it will change their Colour.

If the Medals are Silver, uſe the ſame method of binding them round with Paper; and oyling them; mix a little Plaiſter of *Paris* with Water, and fill the Hoop with it, then immediately fill the Caſe in a ſprinkling manner with the ſame Plaiſter till it hardens; and when it is dry take it from the Medal. But

But from the Moulds cast in Brimstone, which are concave, we again cast such Medals in Plaister of *Paris* as are convex, oyling the Mould as before, and using the Plaister of *Paris* as above directed ; so you may take off any Medal, or fine *Bajs-relief*, with a great deal of Exactness, even so as to form Medals from them in any sort of Metal. But there is no one that I know so curious in the Management of this Affair, as Mr *Pingo*, in *New Street Square*, near *Shoe Lane*, *London*.

There is a method of taking off Impressions in Plaister of *Paris* from Copper-plates, by oyling in a minute Degree the Plates, and then binding them about either with Card-paper, or other Paste board, and pouring on some of the finest Plaister of *Paris* and Water you can get, and finishing the Work with Plaister, till it becomes dry, and hardens ; you will then have a fine Impression, if one may so call it, of the Lines of the Plate, in the Plaister, which will serve to draw from, when you have occasion.

We may add still the manner of taking off any fine Engravings from the Tops of Snuff Boxes, or Watch-cases, which is only holding them over the Smoak of a Candle, till they are quite black ; then wipe off the black with the soft part of the Palm of the Hand, and lay on the Engraving a piece of white Paper a little wetted with a Sponge, and over that a thin piece of Flannel, or a piece of brown Paper held hard down over the engraved part, and being hard rubb'd, the Paper next the Picture will receive a fine Impression, as if it had been pass'd through a Rolling-press.

We may yet recommend another method of taking off Medals in great perfection, which is by getting thin pieces of Lead, and placing the Medal horizontally on the top of a firm post, or any steady place ; lay over the Lead a flat piece of harder Metal, and over that place a piece of a round turn'd stick, such as is used in the Staff of a Broom, sawn off above five or six Inches in length, and, holding that tight with your left hand on the lead and flat piece of metal, strike the top of the stick a smart blow with a large Hammer, and the Lead will be perfectly impress'd with the Image of the Medal ;

Medal ; this Blow must be done at once, to render the Impression perfect : Even this may be done on any Impression made on Sealing-wax.

We may likewise take off a Medal, by laying over it a piece of thin Sheet Block-tin, otherwise called *Foyle*, which is sold at the same places where the Plaister of *Paris* is to be had, or at some Pewterers Shops, and rubbing it hard upon the Medal, it will give us a very good Likeness of whatever medal we rub it upon. The Block-tin Sheet I mean, is such as is laid on the Backs of Glasses, when they are to be silver'd, to render them Looking-glass.

We may also take Impressions from Medals with Putty, such as the Glaziers use, although the Medals or *Bass-reliefs* are under-wrought.

Another Way of taking off Medals is to provide the Scraps or Shavings of white Paper, which you may have at the Book binders ; you must boil them well in common Water till they are tender, then bruise them well in a Mortar till they come like a Paste, and boil them again in Spring-water, with a little Gum-Arabick ; and, letting this mixture settle a while, pour the Water from it through a Sieve or Linnen-cloth, and what remains is extraordinary good, to either press into any mould, or upon any Medal, and when the Paste is dry it will come off very sharp.

Some medals that are under-wrought cannot be taken off this Way ; therefore in such Cases, we must take common Glue with Water, melt it, and when we have fixt a Hoop of Paste-board round the Edge of our medal, pour on the Glue hot, having first oyl'd the medal with a lump of greasy Cotton.

When the Glue is dry and hard, we must take off the Hoop, and the Glue will fly from the Edges of the Medal ; and it will then easily come off, being subject to bend and give way, which the other Things before mentioned will not do. We should mind to make our Glue strong enough, and pour it on one third of an Inch thick.

When we have taken the Impression by this means, we must hoop round our mould of Glue with Card-paper
or

or Paste-board, as before ; and oyl it, so that no Bubbles or blisters may be seen, that is to say, just make it greasy ; then we may cast some Plaister of *Paris* in it, and we shall have a good Copy of the Medal : When this is dry the Glue will fly off, or may be broken off, and we shall have a good Pattern to cast from.

We may likewise make a Putty of Linseed-oyl and fine ground Starch, which, being well workt together into a paste, will take a good Impression from any medal. This is much better than the common Putty.

When we have these Moulds, we may cast in them good Medals in Bees-wax ; but they will come off much sharper if the mould be in Brimstone, than if it be in Plaister of *Paris* : But when we do this, our Wax should be as well blanch'd or whiten'd, as one would use for Wax candles ; it is however necessary to grease the mould before we pour in our Wax, as I have directed before.

However, tho' I recommend white Wax as preferable to the other, I would not chuse to have the copy of the medal white ; for the darker Colours shew the Figures much better.

If we would have our Copy of a red Colour, we must mix Vermillion with our Wax when 'tis melting ; or if blue, put into our melted Wax some Stone-blue well beaten or ground.

As soon as our Wax Medals are cold enough to take off, we should lay some Leaf gold upon them, and with a piece of Cotton press it down gently, without rubbing it backwards or forwards, and that will gild our Medal.

When we have cast medals in Plaister of *Paris*, to make them look like steel or metal, we must rub them over with a piece of cotton dipt slightly in Oyl, and then put on them some powder of black Lead, and rub them well with a Brush, such as is us'd for the Teeth, 'till the whole is equally cover'd ; and they will have a fine Gloss upon them.

But we may make the Plaister of *Paris* medals of the Colour of Box, by boiling them in Linseed Oyl ; and
it

it will harden them, so as to bear the Brush to be clean'd if any dust gets at them.

If we would have our Plaister of *Paris* medals of a yellow or golden Colour, we must take a little Pearl ash, and boil it in a Pint of Water, 'till it makes a strong Lixivium; then put in about half a quarter of a pint of *French Berries*, and boil them till the Liquor is of a very strong yellow, and use this Liquor with our Plaister of *Paris* instead of common Water.

If we would have our Plaister of *Paris* Medals be of a blue Colour, we must boil some Lacmus or Litmus in River-water; 'till the Water is as blue as we think proper; and must use this Water with our Plaister, when we cast a medal, to render it of a fine Colour.

If we would have our plaister medals of a red Colour, we should boil a little Raspings of Brasil-wood in pale stale Beer, and, when it is strain'd off, use it as common Water with the Plaister.

I Have not yet try'd, whether the fine transparent Gum made of Verdegrease will mix with plaister of *Paris*, but I have good reason to judge that it will; and, as it is cheap enough, I suppose it would not be unworthy any one's Tryal.

I Have often thought, that by these means one might easily collect a set of all the Coins of our Nation, and to distribute them as one should, in the several Kings Reigns, they would make no disagreeable Furniture, being plac'd in proper Order; the Gold by themselves of each King's Reign, with his Figure and the Reverse by one another, and under it the Value of the Coin; then the Silver in their proper Order; and the Brass, or Copper, or Pewter, (for such we have had) and even the Leather Coins should not escape our Notice.

Or, to improve this, if we had Time to spare and good Opportunity, we might have the Resemblance of the Coins of every Country; and by writing the Value of each of them, such a Collection would be of use to Travellers, as well as to Historians.

The easiest Way of doing this would be with the Ichthyocolla or Fish-glue; and so for the Gold Coins use Leaf gold, as before directed; for the Silver, Leaf-silver;

silver ; and for the Copper, Leaf copper, which is made in *Germany* : Or else for Silver we should make our Medals with *Foyle*, as before directed ; and for the Leather Coins mix a little Fullers Earth with the Water or Spirit, before we melt the Fish-glue or Isinglass in it.

So far I have given Instructions how we may either make Drawings from the Life, or copy whatever we think proper from Prints, Paintings, Medals, &c. tho' we knew nothing of Drawing before.



C H A P. V.

Of Colours for illuminating of Prints in the best Manner ; or of Painting in Water-Colours.

C OLOURS are to be distinguished in the following Manner ; we must first take White, the next Yellow, the next Orange, and then proceed to the Red, after that the Purple, then to the Blue, and after that to the Black. Observe, White and Black are the Extremes of Colour ; then in the next place, Yellow is the lesser point of Colour towards the White, and the next to that is the Green, and after that the Blue. I speak of this, because every one who has a mind to know the manner of Colouring of Prints, or painting in Miniature may profit by it.

I Shall begin then with regard to Colouring of Prints. If the Paper be pure white, use no Colour upon it, unless in the shaded parts ; and then in painting of Flowers, if they tend towards a reddish Colour, use a faint Colour of Carmine with Gum water, upon the Shades only ; if blueish, use a little faint Indigo in Gum-water, slightly pass'd over the Shades, easily touching upon the Lights ; where there is a yellow Tinge, either use a faint Tincture of Gamboge, or of *French Berries*,

Berries, which will be described among the Yellows ; or if the White have a purplish cast, use a thin lake on the shady side, suffering the Colour only to shine a little into the Light, it will give a Lustre to the Whites ; and if a greenish cast should be there, use either a faint Colour hardly to be discern'd, of the sap Green, or in proportion, of the sap Green mix'd with the Verdegrease Green.

N. B. All these Colours mention'd to shade the Whites, may be found in the following Directions.



C H A P. VI.

Of Whites for Painting in Miniature.

THE best White that is pretended to be sold in the Water-colour manner, is the Flake-white, which is better than the White-lead ground : This, if it is pure, far exceeds the White lead in Beauty ; for the White lead is apt to turn blackish, especially if you use it with hard Water.

But the best White that I know, is made of Pearl, or the finer parts of Oyfter-shells, made into an impalpable Powder, that is, so soft as to feel like Grounds of Starch, or Powder for the Hair, when we touch it with the Fingers ; this is called by some of the Colour men Pearl-white, but 'tis hard to be found. If we have occasion to use it, this White will mix well with any Colour ; but if we use White-lead, let it be first rectified with white Wine Vinegar, which will cause a Fermentation, and soon make the white settle ; then pour off the Vinegar, and wash it with common Water ; that is, put the Powder into a Glass of Water, stir it about, and presently pour off the Water, while it is white, into some clean Receiver ; and when the white parts are settled, pour off the Water from thence, and they will be extremely fine. I mention this, that every one may make their Colours of the finest sort. It may be perhaps a little Trouble ; but who would not use such

such pains to be superior to any thing that has been done before in the same Way ?

When the White we speak of is settled, add to it as much Gum-water as is necessary to bind it, or give it a Glaze ; but take Notice that I would not have any white used in colouring of Prints, but only with dry Colours, when we paint in Miniature.

It is remarkable that White lead will change black, if the Water we use with it comes from Iron or Clay : When I say black, I mean that in a Month or two you will find the places where it lies the thickest, tinged with black, and when 'tis mix'd with any other Colour, it will soon change, or alter it.

For this reason, I have try'd divers sorts of White ; among others, the Powder of Egg-shells, of the brightest Colour, and well clean'd and wash'd, is very good to be ground with Gum-water, or else put about a twentieth part of clear white Sugar candied to grind with it in Water ; reduce this as fine as possible, that is to the state of what we call an impalpable Powder, and use it. A Gentleman, whom I have given this Receipt to, tells me, that it is still more to the purpose to pour it on some rectify'd Spirits of Wine, which, he says, will clear it from the Dross ; but I have not try'd the Experiment : I suppose, that when the Spirit of Wine has done its Work, it must be pour'd off, and then the parts left behind must be mix'd with Gum-water again ; but that Egg shell powder is of great Service as a white in Water-colours, I know very well ; and that also itself, and Oyster-shell powder, well rectify'd and mix'd with the White of an Egg well beaten, will make an extraordinary Mixture with other Colours, and correct them from changing or altering their Qualities.

While I am speaking of white for illuminating of Prints, as I have already observ'd, that the clear white of the Paper is proper to be left uncolour'd ; so if it happens, that the Paper is given to *sink*, as it is call'd, or to spread any Water colour we lay upon it more than is necessary, then the Way to correct it is as follows ; We must fix the Paper in such a Station, as may only
receive

receive the Colour we lay on to glaze just as far as we design'd it ; then take some Starch boil'd and prepared in Water, of a middle strength, and with a large Painting-brush stroke it over the back of the Print, and, when it is well dry'd in the Air or Sun, put the Print in a Book, with a Weight upon it, to rectify the Crumplings which it may receive by wetting of it ; so will any Print be made to receive Water-colours as one would have them be distributed, and none of them will then run farther than we intended.

There is an Earth brought sometimes from *China* of a very soft Nature, and very white, which I find is better in Water-colours than any of the rest ; but 'tis very scarce.



C H A P. VII.

Of Y E L L O W s.

TH E R E are some Objects which have the Appearance of Gold shining through the Colour of Green, Red, or Blue ; such as some sort of Flies and Beetles, and such as the Cantharides, which last sort every one may buy at the Druggists. This Gold-Transparency is very well imitated, by laying on the Drawing some Leaf-gold on the shaded part, a little giving in to the light side of the print ; the Way of laying on of Leaf-gold, is to wash the part where the Gold is to be with strong Gum water, and soon after that put the Gold on as smooth and even as possible, pressing it down close with Cotton : But take care that, when you lay on the Gum-water, you do not exceed the Limits you would have the Gold appear to shine. In this Case the Gold is only to shine through the transparent Colour, which is to be laid upon it.

Now it must be understood, that the Leaf-gold will not regularly receive Water-colours ; so that, to render it subservient to our purpose, we must, with a little thin

thin Liquor of Ox gall in a painting brush of Camel's Hair, stroke it over, and then it will receive any Colour we have a mind to paint upon it, and hold it. So you may have Gold Greens, Gold Reds, and Purples, Blues, or what you please. The Greens may be, first the Verdigrease Green, which I shall describe hereafter ; or the Sap Green, or Lake, or Carmine, if they are good ; or for Purples, Lake and fine Indigo, or Carmine and Indigo ; and for the Blues, Indigo on the dark side, and on the light side a little stroke of Ultramarine Blue, just to shine into the Light, and it will have a wonderful Effect.

N. B. One may find upon Rose-trees in *June* and *July*, a Beetle of a green Gold-colour, which will serve to govern this kind of Painting. As for Gold of itself, I would not advise it to be used, unless we polish it, and then you may take the following method.

We see in many Manuscripts fine Gold Letters, which rise above the Surface of the Volume or Paper ; these have raised the Admiration of the Curious, and the manner of making them is but little known ; the Composition, which raises them above the Paper, is made, as I am well inform'd of Vermillion and the white of an Egg, whisk'd or beaten up to that Consistence, as is call'd an Oyl, work'd together like a kind of Paste, and with a Stamp fix'd to the Paper with Gum-Arabick ; on this Figure of a Letter wash, with a Camel's Hair Pencil, some strong Gumwater, taking care that the Gum does not reach more than the Out-lines ; then lay on the Leaf-gold close with some Cotton ; and as soon as it is dry, rub it with some dry Cotton, and then polish it with a Dog's Tooth ; this will make it appear as if it was really cast in Gold.

There is yet another Way of working these Things in Gold ; and that is, by using the Gold which is prepar'd in Shells, but it must be pure Gold, and not such as is brought from some places in *Germany*, which will change Green in a few Days time.

Before you use this Gold, cover the shady parts with Vermillion ; and then, after your Gold is well rectified with Spirits of Wine, lay it on with Gum-water, which will

will mix with it very well, and when it is dry, polish it with a Dog's Tooth. I chuse when I lay on this Powder gold, to leave the Lights vacant of it, and it makes a much brighter Appearance, than if one was to cover the Object all over.

But if one was to cover by Accident the whole piece with Gold, there is no better way to set it off, than by tracing over the shady parts with Gall-stones; or, which is much preferable, the Yellow, which I shall give the Composition of below, made of *French Berries*, I mean that which is the deepest in Colour; a little Minium brightens it very much; but see how I rectify the Minium, amongst the REDS, and polish the Gold before you use any Minium to it.

Since I have mention'd Gold, I am next to speak of the Yellows, as they fall gradually in their course of strength.

The first is a kind of Straw colour, and is made of Flower of Brimstone, which in itself is fine enough to mix with Gum-water; and the manner of preparing Gum-water, since I have not yet mention'd it, I shall insert at the end of this Treatise of Colours.

A Common way of illuminating of prints, is by giving the Tincture of Gamboge for a Yellow; and this may be of two or three sorts, either fainter or stronger; the last to be a shade to the first, and that to be shaded with the preparation of *French Berries*, which I shall presently mention,

The great Mr. *Boyle* has left some papers behind him that were never publish'd, which my Lord *Carleton* gave me, and I shall insert occasionally in this Treatise. With regard to yellow Colours, he says, that if the Roots of *Barberries* are cut, and put in a Lixivium made strong with Water and Pearl ashes, there will be a fine yellow Colour produced from it; which I have tried, and succeeds very well.

Another Way Mr. *Boyle* proposes, to make a transparent Yellow, which is, to take the Root of the Mulberry, which affords a very yellowish Juice, to wash it well from the Earth in common Water, and boil it in the Lixivium I speak of, made with Pearl ashes and

Water; from this we may take out a strong Tincture, much deeper than the former; but the Roots of the Mulberries are much harder to be had than those of the Barberries; for Mulberry-trees are very scarce, and the Barberries are in almost every Hedge in *Essex*, about *Littlebury* especially.

With regard to the Barberry-root, I think it would be worth while to plant them on purpose, for the Advantage that one might make from them by Dying; the Fruit, in my Opinion, being of little Signification, but the Root and the Wood, I think, will nearly answer the same End, in producing a fine Yellow.

Yellow Oker will make another good pale Yellow; but, for illuminating of Prints, it is a Colour rather of too much body; however, being well ground with Gum-water, it is of use after it has been well wash'd.

Another good Yellow may be made from the plant call'd Celandine, infusing it in Water, and pressing it gently, and then boiling the Liquor with a little Allum; this Yellow will be a little inclining to Green.

But the Yellow which I like the best, and may be used in several Capacities of Lights and Strength, is that made of *French Berries*, prepared as follows.

Take of *French Berries* an Ounce whole, and boil them in a Pint of the Lixivium made of Pearl ashes and Water, till the Liquor will give a fine Tinge of Yellow to a bit of Paper dipp'd in it; then pour it off from the Berries, and when 'tis cool, put it in a Bott'e for Use. But if we only put *French Berries* to infuse in common Water, they will produce a good Yellow, but then it will not be durable.

Then again, add half a Pint of the same Lixivium to the Berries, and half an Ounce of fresh Berries, and boil them, till the Liquor is as deep as Gall-stone; which will serve to shade all the Yellows you can use of any sort. You may boil this even to produce a brown Colour; and with a little Ox gall, it will serve to shade any Leaf-gold that has been laid on Paper, as directed before, and is much preferable to Gall-stone in imitating
any

any Gold-colour. It answers well upon a Tincture of Gamboge, or any of the former Yellows.

Next to this is the Tincture of Saffron, which, with common Water only, affords a bright reddish Yellow, such as one would have (to cover the shadow'd parts of a Print) for an Orange or *be'd** Gold-colour; however, there is nothing more high, when we use Saffron, than when we infuse it in rectified Spirits of Wine; but then the Colour flies, unless we load it with Gum-Arabick, as I have try'd.

As for a deep Yellow with a body, *Dutch Pink* comes the nearest to the aforesaid strong Yellow made of *French Berries*, in point of Colour; and of a lighter Yellow is the *English Pink*, which is still made of *French Berries*, and in a body likewise.

I Cannot help observing, that one may extract a good yellow Colour, for illuminating of prints, from the fresh Roots of Ginger, if one can get nothing else; I speak this, because sometimes one wants a good Yellow, and any one may find this any where, if Gamboge can't be had; and it makes a fine Green, with the transparent Verdegreafe I shall hereafter mention. *N. B.* This last Hint I took from Mr. *Boyle's Papers*.

It is again to be remark'd, that the *English* and *Dutch Yellow Pinks* are made with *French Berries* ground to a fine Powder and boiled.



CHAP. VIII.

Of ORANGE COLOUR.

THE Orange-colour, which is useful to wash fine Prints with, consists in laying on a Teint of Gamboge, and over that, some of the Minium or Red-lead,

E 2

such

* By *be'd* is meant the boiling of pure Gold in Liquors, which will take away the Yellow of it, and bring it to be of a reddish or higher Colour.

such as I shall describe, to be wash'd, and render'd fine and fit for Use; for, as it is bought at the shops, it is not by any means fine enough to paint with, and especially will change or turn black after a few Weeks, if it be not refin'd; but if it be well prepared, will be very lasting and beautiful: But we must take this by the Way, that in the refining of it, two Ounces will not produce above 40 Grains of good Colour, to stand the Test of the Painters. I shall presently describe the Method of Preparing it: This Colour may be mix'd with Gamboge, upon a white *Dutch* Tile to render it of the Teint we desire, either soft or stronger; or one may glaze the Gamboge, and strengthen it with Tincture of Saffron, to make it glare into a strong Orange.



C H A P. IX.

Of Minium, or the brightest Red-lead, and how to prepare it.

TH E Minium, or Red-lead, is as heavy and strong a Colour as most we have, but is the most delightful one, when well prepared, that is, when 'tis well wash'd and clean'd of its more weighty Parts, which occasion it to turn black. My Way of doing it, as the great Mr. *Boyle* directs, is to put 3 or 4 Ounces of it in a Quart of Rain-water; then stir it, and pour off the Water immediately, and let it settle to the bottom of every Cup or Glais you pour it in; then pour off that Water, and in a Day's time you will have the Colour dry, and as fine as you can wish; put then a little piece of Gum Arabick to each Glais or Cup, and as much Water as will moisten each of them; Use any of these afterwards with the Gum-water, as shall be hereafter directed; but if the Gum, you should happen to put in at first, may be strong enough to glaze it, then use only common Water; in a Word, as your Colour is less gumm'd or overgumm'd, use less or more Gum water; for of itself 'tis a dead Colour. When

When you use this Colour, touch it gently on the Yellow we have mentioned into the light Side, and if it wants a Shade, there may be a little Vermillion Put upon it ; but Vermillion is too heavy to paint with, when we illuminate Prints, because it hides the Shades of the Engraver ; however, sometimes they had better be hidden than preserved : For my part, I generally shade this Red lead or Minium with Carmine, which gives it a fine Effect, and renders it equal to the brightest red Flower I ever saw, leaving still the Lights uncoloured, only dashing a little way into the Lights with the Minium.

Vermilion I must advise to be left out of the Question, unless it is well wash'd, as I have directed the Minium to be, and then chiefly for dry painting ; One may think then, that after I have advised the Vermilion to be abandoned, it should be quite left out of my Table of Colours ; but I speak at that Time to such Persons as can use it moderately, and with Judgment ; for all heavy Colours will drown the Shades or Strokes of the Engraver.

When the Carmine has shaded the Minium, or Red-lead, it may be shaded again with Lake in the strongest Part, to bring it to a deeper Red.

It may be a Wonder to some, that when I speak of Orange.colours, I should mention some of these deep Sorts, tending to Purples ; but I mention them as Shades, and without which the Orange or Red could not appear with any Brightness.



C H A P. X.

Of Reds.

S E C T. I. Of Scarlet.

WHEN we have passed the Orange, we next come to the Scarlet, which may be represented on a Plane with Minium, a little mix'd with Vermillion; but

but if you have Occasion to paint a Flower of a Scarlet-colour on a Print, let your Lights, as well as Shades, be covered thin with Minium, and the shaded Parts glazed with Carmine, which will produce an admirable Scarlet, such as we see in the Flower of the Scarlet Martagon.

S E C T. II. *Of Crimson.*

FR O M the Scarlet we next come to Crimson, which is represented with Carmine; but I must inform the Person who is to use it, that there are several sorts of it, some darker, and some much coarser than others, and therefore it should never be bought by Candle-light, unless of such as one can well trust; for between the very best and the worst Sort, there is about ten Shillings difference in an Ounce, or indeed all the Money an Ounce will cost, for the bad will spoil all our Work.

S E C T. III. *Of Lake.*

AF T E R this Crimson, comes next the Lake, which shades and heightens the Carmine; but it is to be observ'd, that in the laying of Carmine upon a Print, let your lights be touched only with a very thin Teint of it, hardly to be discerned; then just on that part of the Light which enters upon the shade lay it on strong, and cover the shade with it; and after that, on the stronger part of the shade lay some Lake.

S E C T. IV. *Of transparent Crimson.*

BU T we may make a liquid Colour, not much inferior to Carmine itself, with the Rasplings of Brazil-wood, sold at the Dry-salters and particularly at the great Colour-shop at *Holborn bridge*; which I mention, because I have been some time without knowing where to find it, for few Colour-shops know what it is; and Lovers of Painting in this Way, are now and then impatient to have such Things, and unacquainted where to find them out.

To make this transparent Colour, we may take an Ounce of the Rasplings of Brasil-wood, and boil it in twelve Ounces of pale stale Beer, and a little Allum, 'till the Colour of the Liquor is as strong as you please ; which you may discover, by dipping into it a slip of white Paper, and when the Colour is as you would have it, and 'tis cold, pass it through a Linnen-cloth, and put the clear Liquor into a Bottle for Use. This is one of the Receipts I had from a Manuscript of the great Mr. Boyle.

And if we have a mind to bring this Colour to a Body, take Ox blood, and dry it, till we can reduce it to Powder, which, being mix'd with it, will give us a Colour, which I think will be little less in Value than a middling sort of Carmine : And, as a Gentleman of Learning and good Understanding in these Matters informs me, the Blood of an Ox or Cow so dry'd, will make a good Body for any Colour.

S E C T. V. *Crimson from Mr. Boyle.*

TA K E the Fruit of the Berry bearing Spinach, which is known to every Gardener about *London*, press them, and you will have a beautiful red colour'd Juice from them ; boil this, and put about a fourth part of Alum to it when you pour it into the Vessel where 'tis to cool, and then it makes as fine a Colour as any others that are noted, and it is of little Expence, for it will grow any where ; and in one Bunch of the Fruit there are Seeds enough to sow two or three Rods of Ground.

The red Beet-root, back'd with a little strong Vinegar, produces an elegant red Colour, equal to a Tincture of Carmine, then pour it on Alum, and when 'tis cool 'tis fit for Use, where Carmine should be used in washing of Prints : For it is a fine transparent red.

S E C T. VI. *Of Indian-Red.*

NE X T to these Colours. Indian-Red, though it is a Colour of a Body, is helpful for a back Ground, for Flowers at a Distance, being used thereby with Gum-water.

water. But I shall have Occasion to give an Example of it by and by.

I have lately seen an Earth brought from the *Ile of Wight*, of a much finer Colour than the Indian-red; which I and some others, have try'd, and find to mix extremely well with Gum-water; tho' as it is of a viscous Nature, it requires less Gum than most other Colours: And as it is naturally fit for Use without Grinding, and is viscous, so it will assuredly mix as well with Oyl as with Water. This was discovered by *Edward Lisse, Esq;* to which Gentleman we owe many more extraordinary Things of Value.

There is one thing very extraordinary in this Earth, simple as 'tis, that if we rub a Deal-board with it, it renders it exactly of the Colour of *Mohogany* wood, and stains it so deep, and with so much Strength, that it is very hard to get it out without washing. And dry as this Earth was when I receiv'd it, I cannot get it out of some Papers, which by Accident were mix'd in my Pocket with it; so that I am perswaded it will prove of extraordinary Use, when its Virtues come to be known.

S E C T. VII. *Of transparent Purple.*

AFTER this we may make a transparent Purple, either more red, or nearer the blue Colour, as we shall see Occasion, by using the same Menstruum as was prescribed in the former, *viz.* of pale stale Beer one Pint, in which boil one Pint of rasped *Brasil*-wood, and half an Ounce of *Log-wood* or *Campechy*-wood, till the Liquor is heighten'd to the Colour you desire; which you must try, by dipping a piece of Paper into it. If you then find it too red, add a Quarter of an Ounce of *Log wood* to the *Brasil*-wood, and you will find it much nearer the Purple than the former; and so one may humour any Degree of Purple, as you put more or less *Log wood* to the former Composition, and fix the Colour with a little *Alum*. This will produce such clear Purples, as no Mixture of solid Reds and Blues can produce, and the Receipt has been for a long time kept a Secret.

Madam

Madam *Mariana* of *Amsterdam*, who has been so famous for her Painting in Minature, and her excellent Manner of illuminating Prints, told me, that the best Purple I could use, might be composed between the Carmine and Indigo ; which to strengthen on the red Side one may add Lake between the lighter and darker Part ; which I have in many Cases found to be good, and of Significancy : And so Lake, when it is used in the same Way on the foregoing Purple, or the Liquid Crimson, produces a very fine Effect. One may vary the Colour of the Purple either redder, by putting more Carmine, or bluer by using more Indigo, which being mixed on a white *Dutch Tie*, will shew itself.



C H A P. XI.

Of Blue.

S E C T. I. Of the Ultramarine.

THE first and best bright blue we have, is the Ultramarine-Blue, which gives a Spirit to all Paintings where Blues are used, but it is very dear, if we have the best, even worth, or at least sold at six Pounds an Ounce ; it is made from the *Lapis Lazuli*, divested of its Gold, and ground and made into an impalpable Powder. This Colour however, as it is of a very high price, will make good its Value in Painting, as the least Touch of it is enough to illuminate a Flower. In using it, leave the white or light part of the Flower uncoloured, excepting that on the Edge of the light next the shaded Parts, colour it with Ultramarine ; and, a little into the shaded part of the Print, add a faint Tincture of Indigo, the Indigo covering a little the Verge on the shady side of the Ultramarine, so will your Flower, &c. if it be a bright Blue, appear extremely beautiful.

N. B. This is a colour of Body, and will last as long as one would desire, and even preserve any Colour you can mix with it.

To use it singly, there is nothing more dazling; as appeared in the case of Colouring Iron-gates, which many Years ago was executed at the Entrance of *Devonshire-house* in *Picadilly*. This Colour was laid upon the Iron-work, at the Expence of many hundred Pounds, and remain'd in great Beauty 'till they were taken down, and the Entrance of that Palace altered; which shews that this Colour will not change, though it suffers all kinds of Weather; for 'tis computed that they had been exposed upwards of sixty Years. But the best Colour of this sort is rarely to be met with.

S E C T. II. *Of the Prussian Blue.*

TH E Prussian Blue is the next to the Ultramarine for Beauty, if it is used in Oyl; tho' I imagine it will not hold so well as the foregoing, considering it has not the Body of Ultramarine. This Colour, however, is attempted to be ground in Water; but there is such an oily Quality in it, that it does not mix kindly with Water, and at the best will change, as it is now prepared in the common Way. It has been attempted to make a blue Ink; which indeed held the Colour for a Month or two, but then turn'd to a muddy Yellow; so when you put your pencil with Gum-water into a Shell of this Blue, you will find where the water spreads, the Blue will change yellowish, till the Body of the Blue is well stirr'd up. And when we have done our best with this Colour in Water, it will only serve to shade Ultramarine with; but in Oyl it serves very well for the present to fill the place of Ultramarine.

S E C T. III. *Of Blue Bise.*

TH E next Colour to the foregoing for Brightness, is that which we call blue Bise; which tho' it is a Colour of body, will flow pretty well in the pencil; especially if it be well washed, as I have directed the Whites and the Minium to be done.

S E C T.

S E C T. IV. Of Sanders Blue.

AFTER this Colour the Sanders Blue is of very good Use, and may serve as a shade for Ultramarine, or the blue Bise, where the shades are not required to be extremely deep, and is of itself a pleasant Blue, to be laid between the Lights and shades of such a Flower as is of a Mazarine Blue, as 'tis called.

S E C T. V. Of Lacmus or Litmus Blue.

ANOTHER Blue, which is a beautiful Colour, and will run in a Pen as free as Ink, is made of Lacmus, or as some call it Litmus, which may be met with at most Druggists. This Colour however is never met with prepared for Water colours; and therefore I shall set down the following Method of preparing it according to Mrs. *Mariana*, for it affords a bright Colour; which has extraordinary Effects.

Take of Lacmus one Ounce, and boil it in about a pint of Small beer Wort, till the Colour is as strong as you desire, then pour off the Liquor into a Gallipot, and let it cool for Use; it will soon become a Jelly, and by Degrees grow hard. This Colour, however, is to be opened again, and made liquid by Water, so as to be used as Ink; and as it is rendered thinner or thicker, so will it be paler or darker. By what I find of this Lacmus, it is not only a beautiful but an holding Colour; for I have some Designs I coloured with it in the Year 1714, which still preserve themselves in as much beauty as they had at first; and I have seen some in *Holland*, which were said to be done with it forty Years before, which a Year or two ago look'd still as fresh as one would desire the first Day one used it. This Colour, however, if it be touch'd with *Aqua fortis*, immediately changes to a fine Crimson, little inferior to Carmine, and then sinks quite through the Paper so as not to be got out.

So that when we use this Colour as Blue, it is best to preserve it from *Aqua-fortis*, or such strong Acids. It is a good shade for Ultramarine, or blue Bise, where the strongest shades should not be extremely deep; and for colouring of Prints it is very good, as it is a transparent Colour, and goes a great Way.

S E C T. VI. *Of Indigo.*

INDIGO is the next Colour I shall speak of, as it certainly makes the strongest shade for Blues of any other, and is a soft and warm Colour, when it is well ground and wash'd with Gum-water, by means of a Stone and Muller. As one happens to want the Use of this, put more Gum water to it, if you would have it of the lightest cast, or less, as you would have it darker ; but before you touch your Print with it, try its Strength upon a white *Dutch Tile*, for it runs warmly in the Pencil, and may chance to be too strong for your Design ; which you should always think of, when a flowing Colour is to be laid over a dark shade of a Print ; which shade will much aggravate its Blackness, and even make it appear quite Black.

S E C T. VII. *A fine Blue from Mr. Boyle.*

TAKE the blue Leaves of Rhue, and beat them a little in a Stone mortar with a wooden Pestel ; then put them in Water, Juice and all, for fourteen Days, or more, washing them every Day till they are rotten ; and at last beat them and the Water together, till they are in a Pulp, and let them dry in the Sun. This will produce as good a Blue as Indigo, and be much softer ; but to keep it a long while, when you beat it the last Time, add a little Powder of Gum-Arabick : You may put more or less of the Gum, as you design to make it more free or tenacious in the Working. 'Tis a fine Blue for shading, and has a good Body, and runs warm in the Pencil.

S E C T. VIII. *Of Mr. Boyle's transparent Blue, equal to Ultramarine.*

IN the next Place, I have a Colour to describe, which I took from the great Mr. *Boyl's* Manuscripts given me by my Lord *Carleton*, and proves a beautiful Blue ; and what I admire it for the more is, because the chief of the Ingredients it is composed of, may be easily had during four of the Summer Months, that is, the Cyanus or blue Cornbottle-flower, which abounds in almost every

ry Corn-field ; Children may gather it, without hurting any thing, about the Skirts or verges of the Corn-fields. This Flower has two Blues in it, one of a pale Colour in the larger outward Leaves, and the other a deeper Blue, which lies in the middle of the Flower ; both these will do, if they are separated from the Buttons or Cases they grow in ; but the deep Blue, of the Middle produces much the best Colour, as one may try, by rubbing it while it is fresh, so hard upon a piece of good writting Paper, as to press out the Juice, and it will yield an excellent Colour, which will not fade as the Experience of two or three Years has shewed me. This part of the Flower is therefore the principal, and what is to be depended upon ; therefore the same Day that People gather the Flowers, or the next at the latest, employ some Children to pick that part clean from the rest ; and when you have a good Quantity, press what Juice you can from it ; and by adding to that a little Allum, you will have a lasting transparent Blue, of as bright a staining colour as you would desire ; and in my Opinion, it is not inferior in Beauty to Ultramarine : But for the other parts of the Flower, which are paler, I must observe, that when I had a Bushel of them gathered, and had not an Opportunity of pressing them immediately, they changed white ; so that I cannot commend them, lest the Alum should not fix them ; but as for the middle of the flower, it is certainly as good a Blue as can be desired, and is durable.

If any one should object, that 'twill be troublesome to make it ; let him consider only what pains there is in gathering and curing of Saffron which sometimes is sold at thirty Shillings the Pound, and seldom brings three Pounds *per* Pound : But a Blue, if it comes up to the Colour of Ultramarine, is worth four or five Pounds *per* Ounce, especially when it stains so well as this does ; therefore I should think it worth while, when any one has made this Experiment, as I have done, to have a piece of Ground on purpose for this Use, where no other Thing but this Corn-bottle, or Cyanus should be sown : And as this Flower is plentiful enough in the Fields between *Twittenham* and *Tedington*, in *Middlesex*, so there may

may be Seed enough gathered of it, in a Quarter of an Hour, to sow an hundred acres. There is likewise abundance of it in the large Corn fields in *Cambridgeshire*. But how valuable are many Things that we daily trample under Foot ; if we knew their Virtues, we should use them, provided we could bring them to a proper Market. But let that be as it will ; gather the Flowers about the beginning of *June* or in *July*, or *August*, and some you may find in *May* ; these are for your immediate Work to make the Colour of. and must be dispatched as Saffron is done, or it will lose its Perfections. And as I happen to mention Saffron, which I very well know the Management of, by drying it on Kilns, I do not see why these Chives of Flowers may not be cured in the same Manner ; they would certainly produce a much greater body of Colour, and a Tincture might be drawn from them with more ease, than if we were to press them raw or fresh from the Field.

The Way then that I would have them dry'd like Saffron, is. to provide in the first place such a Kiln as is used for curing Saffron ; within which, make a small Charcoal-fire, which communicates an Heat to the top of the Kiln, which is covered with an Hair Cloth ; and upon that, lay on four or five Sheets of white Paper, I mean such as we use for curing of Saffron ; then lay on the Paper a parcel of the picked Flowers, till you have the thickness of two or three Inches, laying close and flat with a Knife, and sprinkle it with some thin Gum-water : then cover the Cake of Flowers with two or three more Sheets of Paper, and lay upon them a Board with a little Weight upon it for a few Minutes ; then take off the Board, and, taking hold of all the Papers with both Hands, turn your Cake of Flowers upon the Kiln, and when 'tis rightly placed, take off the upper Papers, and sprinkle the Cake again with some thin Gum water, and with a Knife settle your Cake of Flowers, and lay on again your Papers and Board, with a Weight upon it for a Minute or two, and then turn your Papers again and again, till the Flower-cake becomes united, and of the thickness of a Cake of Saffron ; in this Work you will find the Flowers grow darker every time they are turned,

turned, till at length the Cake will look of a deep Blue tending to Black. From whence we easily draw such a Tincture as I speak off.

During this Operation, great care must be taken of the Fire, that it does not scorch the Flowers ; let it be gentle and as constant as may be, which will be a sure Way to bring your Flower-cake to a good Colour.

I would advise in this Case, that whoever attempts this they should see the Management of Saffron, or read Accounts that are published of the curing it.

If any one is desirous of seeing the curing of Saffron, with the Manner of the Kilns ; the best Artills that way, are about *Chesterford* and *Little-burry* in *Effex* ; though I think it can be of no great Moment, since there is published a large Account of its Preparation, in Mr. *Bradley's Monthly Treatise of Husbandry and Gardening* ; and in the present Case of the Blue, I have made the necessary Alterations, and I think given what is sufficient for such as are acquainted already with the curing of Flowers by Kiln-drying.

But I come now to speak of the Culture of this valuable Flower ; for I must now so call it, since I am well assured of its perfections.

Every Knob or Head of Seed must be open'd before we sow it, for each Head contains a great number of Seeds ; the preparation of the Ground for the Reception of this Seed, need not be more troublesome or expensive than common Ploughing requires ; which being done, sow the Seed either at the End of *August*, which will come up soon enough to stand the Winter, and blossom early the *May* following ; or else sow it at the End of *March*, and it will begin flowering the following *June*. When the Ground is fresh plow'd at either of these Seasons, sow the Seed, and harrow it in with Bushes, and it will presently come up.

In the Choice of the Seed I should observe, that it be gathered only in such Fields where we are sure there grow no Corn-bottles of any other Colour but Blue, and then one may expect all the plants which rise from such Seed to produce blue flowers ; but if they should be gathered in such places, where there are Varieties of them, we must expect

expect various Sorts, as White, Red, or Purple, although we are sure we gather the Seed from such as were truly of the blue Sort ; for according to the Doctrine of the Generation of Plants, which has been explained to the World in a great many Instances, if there is a red Flower of the same Tribe with this growing near it, the difference of Colour will be so intermix'd between both, that the Seed of both will bring a variety from the principal, depending of the Colours of both. And thus I conclude what I have to say of Blues ; as for the Smalt, 'tis much too heavy a Colour to be used for illuminating of Prints.



C H A P. XII.

Of Black.

TH E proper Black for Water-colours, is what they call Ivory black, which if it be pure and well ground, is of use in minature Painting ; but very seldom, and indeed ought not to be used in colouring of Prints, if they are good, for 'tis too heavy a Colour, and hides the beautiful Strokes of the Engraver, unless done with very great care : If it is necessary however to use Black by way of darkening a Print, rather chuse a strong Tincture of good *Indian Ink*, than the Ivory-black ; but to colour pieces in Miniature, use the Ivory-black prepared as follows.

Let your burnt Ivory be wellground in Gum-water, and then beat the White of an Egg very well till you find a kind of oily Liquor settles to the bottom ; this Liquor mix with as much of the Ivory-black as you think necessary to make it run freely in the Pencil, and it will afford an extraordinary Gloss ; and if the Object is shining, such as the Wings of some Beetles, mix with some of it a little White upon a *Dutch* glazed Tile, till you find it light enough to relieve the Sade ; and then make another lighter Mixture of the same, which being used on the brighter part of the Subject, will produce the Effect you desire.



C H A P. XIII.

Of Greens.

The Progress of Greens from Yellow to Blue.

I HAVE already given an Account of the progress of Colour from White, through the Yellows to the Orange, the Reds, Purples and Blues, to the Blacks : and shall now treat of the Greens in their several Orders, from the Yellows to the Blues.

Greens are allowed by all to depend upon the Yellow and the Blue, and by the help of one and the other Colour, may be framed any green Colour we please.

The Gamboge is one of our first Yellows, which, with the preparation of Verdigrease, I shall insert, may be made to produce five or six Sorts of Green, according as the Gamboge abounds, or is in less Quantity ; if it abounds, one may make a tolerable Oak green with it, and being still more mix'd with the Verdigrease green, it will be a Grass green.

But the Yellow that I prefer before all others, is that which is made of *French Berries* described above, which I have observed is of different Capacities, as the Liquor it is boyled in is more or less stained with it ; when it is very thin, it makes a good Glaze all over the Verdigrease, and, as it comes nearer to *Dutch Pink* or *Gall-stone*, commands almost any Colour we want, being agreeably mix'd with the transparent Verdigrease, and still is transparent.

So the Yellow drawn from the Roots of *Barberries*, and those drawn from the Roots of the *Mulberry-tree*, will produce in great measure the like Effect, being mix'd with the transparent Verdigrease.

As for the Verdigrease itself, it produces a fine blueish Green, flows easy in the Pencil, and may even serve as an Ink to write with.

The preparing of this Colour is yet very little known and I shall therefore inform my Reader how to do it.

Take of common Verdigrease three Ounces, break it a little, and boil it gently in a Pint of White-wine Vinegar, stirring it continually; when you perceive it to boil, add a little Tartar broken, and keep your Mixture stirring till you find the clear Liquor of such a Colour as you would wish; that is, of a fine transparent Green, with a blue Cast, which you may do by dipping in a Stick, and touching a piece of Paper with it.

When you have a Colour to your Mind, pour it through a Linnen-cloth into an open Vessel, and set it to cool; when it is quite cold, keep it in a close Vessel for Use, purging out a little at a time as you want it; for when it is exposed to the Air, it will soon dry, but is reducible again by common Water.

When we prepare this liquid Colour, do not use the distilled Verdigrease, for it will not answer the end we propose.

This Liquid should be touched upon part of the Lights and Shades of a Print, and the Shades afterwards coloured with Sap-green.

N. B. In the making this Green, take care you make it strong enough, for it is not to be strengthened afterwards, without the trouble of boiling afresh, but may at any time be rendered as faint as we please, by mixing common Water with it.

Sap green is a colour like that of an Oak leaf, if it is used thin with common Water; for this as well as the former wants no Gum, but it will, if we use it strong, produce as dark a Green as any we can imagine: We may try our Colour first on a white *Dutch* Tile, and by thinning it with Water, render it of what Strength we please, and brighten it very much, with adding to it a little of the Liquid Verdigrease.

Sap-Green is made two Ways, viz.

First, Take the Flowers of the blue *Flag Iris*, or *Flower-de-Luce*, and press them while there is any Juice to be got from them ; boil this gently in a glazed Pipkin, till it grows thick, adding a little Alum to it, and it will make a very useful and lasting Green.

N. B. In the boyling of any Juice, &c. of the Colours heretofore mentioned, use an earthen glazed Pipkin ; for if you boil them in Vessels of Metal, they will sometimes change from the Design we intend.

Secondly, Another Way there is of producing a Sap-green, for washing or illuminating of Prints, which is to take the Juice of Buckthorn-berries ; and tho' that Juice simply will yield only a dark Purple, of a very base Hue, yet, by adding Tartar to it, it will turn to a good Sap green, and may be brought to a good Consistence by boiling.

Either of these Colours, will mix with the liquid Verdigrease above mentioned, as well as make a delicate Shade for it.

There is yet one Green more, which is admired by some, and carries a good Body with it, with a Degree of Transparency, as I make it ; tho' as it is commonly used, it is a full-bodied Colour, fit only for Miniature painting : For this End they mix *Dutch Pink* with Indigo, to what Degree of Colour they please ; but in the Place of *Dutch Pink*, my high Preparation of *French Berries* with Indigo, I think much to be preferred, as this answers all the Intent of *Dutch Pink*, and carries a Transparency with it, which the *Dutch Pink* has not. And thus have I given such an Account of the Passage of Greens from the Yellow to the darkest Blue, as I think necessary, for the Instruction of those who delight in illuminating of Prints and Painting in Water-colours.



C H A P. XIV.

The Use and Nature of Dry Colours.

1. **B** L U E Bise is the most excellent Blue next to Ultramarine, which is too good to wash withal, and

And therefore I leave it out here, and put in blue Bife, which will very well serve instead of it ; and indeed you may leave out both, and use Smalt instead of them, but that it will not work so well as Bife ; no Bife is too good to use upon all Occasions, but only when you intend to bestow some Cost and Pains upon a Piece, otherwise you may use no other Blue in your Work than blue Verditer, with which you may make a pretty good Shift, without any other Blue, I mean in any ordinary Work.

2. Indigo is a dark blue, and is used principally to shadow with upon your other blue : Indigo and yellow Berries mixed together make a dark Green to shadow other Greens with in the darkest Places.

3. Blue Verditer is a very bright pleasant Blue, and the easiest to work with in Water : It is somewhat inclining to a Green, and being mixed with yellow Berries it makes a good Green : This Blue is most used.

4. Verdigrease is a good Green, but subject to decay ; when it is dry upon the Paper it will be of a lighter colour than it is when you lay it first on ; therefore, to preserve it from that Fault, put some Sap-green amongst it to dissolve it in, and it will make it keep its colour : This colour is of a poisonous Nature, and therefore you must be careful how you use it, that it come not near the Mouth. There is distilled Verdigrease to be bought at the Colour-shops, that is a far better Green than the other, but it is somewhat dear, and the other will serve instead of it.

5. Verditer-green is a light Green, seldom used in any Thing but in colouring Landscapes, those Places that should shew a far off, and it is good for such a Purpose, because it is somewhat inclining to a blue, but you may make a shift to do any thing well enough without it ; for a little blue Verditer mixed with Copper green and a little White, will make just such another Colour.

6. Sap green is a dark dirty Green, and never used but to shadow other Greens in the darkest Places, or else to lay upon some dark Ground behind a Picture, which requires to be coloured with a dark Green ; but you may make a shift well enough without this Green, for Indigo and yellow Berries make just such another Colour.

7. Copper-

7. Copper-Green, is an excellent transparent Green; of a shining Nature if it be thickened in the Sun, or upon a soft Fire, and it is most used of any Green in washing of Prints, especially in colouring of the Grass-ground, or Trees, for it is a most perfect Grass-green.

8. Vermilion is the perfectest Scarlet colour; you need not grind it, nor wash it, it is fine enough of itself, only temper it with your Finger in a Gallipot, or Oyster-shell, with Gum-water, and it will be ready for Use; if you put a little yellow Berries amongst it, it will make it the brighter Colour; this is principally used for Garments.

9. Lake is an excellent Crimson-colour; with it you may shadow Vermilion, or your yellow Garments in the darkest Places; with it you may make a Sky colour, being mixed only with white; with it you make Flesh-colour, sometimes mix'd together with white and a little Red lead; it is of an excellent Colour itself to colour Garments, or the like. *Indian Lake* is the best Lake, but too good to be used to wash Prints with, unless you intend to bestow great Curiosity upon your Work; but the best sort of ordinary Lake will serve well enough for ordinary Uses, but that also will be somewhat costly.

Therefore instead thereof you may use red Ink thickened upon the Fire, and it will serve very well for your Purpose, and better than Lake, unless it be very good.

Note, if you would make a light Sky colour of your red Ink, or if you would mix it among your Flesh-colour, you must not thicken it; you should rather chuse to shadow your Vermillion with Spanish Brown, than thick red Ink, which will serve well for that Purpose, and is much cheaper, but it is not altogether so bright a colour and clear.

10. Red Lead is the nearest to an Orange Colour, and putting a little yellow Berries into some of it, will make a perfect Orange Colour; but if you mean to make Flesh Colour of it, you must put no yellow, but only when you would make an Orange Colour. This
Colour

Colour is used for the colouring of Buildings, or Highways in Landscape, being mix'd with a little white. Also, it is the only bright Colour to shadow yellow Garments with, to make them shew like changeable Taffety ; it is good also to colour any light Ground in a Picture, taking only the thin Water of it, and so for several other Uses as you shall see occasion for it.

11. Yellow Berries are most used in washing of all other Colours ; their Colour is bright and transparent, fit for all Uses, and is sufficient without the Use of any other Yellow.

12. Saffron is a deep Yellow, if you let it stand a pretty while ; it is good principally to shadow yellow Berries with, instead of Red lead ; and it is somewhat a brighter Shadow ; but you may make shift well enough without this Colour, for Red lead and yellow Berries make just such another Colour.

13. Light Masticoat is a light Yellow, just like yellow Berries and white, and therefore you may make shift well enough without it, only for saving you a Labour to mix your yellow Berries with white, when you have Occasion for a light Yellow, which you may sometimes make use of to colour a light Ground in a Picture, and then shadow it with the Water of burnt Umber or Red-lead, that is, the thinnest Part of the Colour.

14, 15. Ceruse is the best White, if it be good and finely ground ready to your Hand, as you may have it at some Colour shops, or for want of it buy White-lead pick'd to your Hand ; either of these will serve well enough, for either of them, being mingled with another Colour, make it lighter, and the more you put, the lighter they will be, as you shall find in the using of them.

16. Spanish Brown is a dirty brown Colour, yet of great Use, not to colour any Garment with, unless it be an old Man's Gown, but to shadow Vermillion, or to lay upon any dark Ground behind a Picture, or to shadow yellow Berries in the darkest Places, when you want Lake, or thick red Ink.

17. It is the best and brightest Colour when it is burnt in the Fire till it be red hot ; tho', if you would colour any Hare, Horse, Dog, or the like, you must not burn it ; but for other Uses it is best when it is burnt, for instance, to colour any wooden Post, Bodies of Trees, or any Thing else of Wood, or any dark Ground in a Picture : It is not to be used about any Garments, unless you would colour many old Men's Gowns, or Caps, standing together, because they must not be all of one Colour of Black, therefore for Distinction and Varieties sake, you may use Umber unburnt for some of them.

18. Printers Black is most used, because it is easiest to be had, and serves very well in washing. *Note*, you must never put any black amongst your Colours to make them dark, for it will make them dirty, neither should you shadow any colour with black, unless it be Spanish Brown, when you would colour an old Man's Gown, that requires to be done of a sad Colour ; for whatsoever is shadowed with black will look dirty, and not bright, fair and beautiful.

19. Ivory burnt, or for want of that, Bone burnt, is the blackest Black, and it is thus made ; take Ivory, or for want of it, some white Bone, and put it into the Fire till it be thoroughly burned, then take it out and let it cool, and so slit it in the middle, and take out the blackest of it in the middle and grind it for Use.



C H A P. XV.

Of a portable Case for Colours ; with Directions for making Gum, Alum, and other Waters.

BEFORE, however, I conclude this Treatise of Colours, let me advise such Persons, who are curious in making Observations of the Colours of Flowers,

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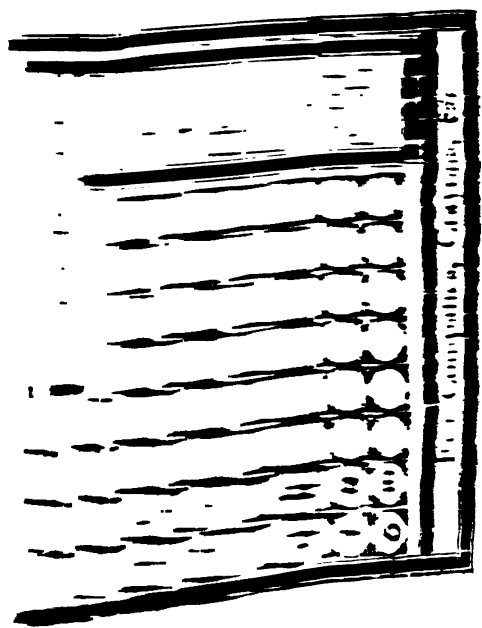
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In the foregoing Figure one may observe the Disposition of the several Cavities for the Colours in the Numbers 1, 2, 3, 4, 5, &c., and on one side a little Case for Pencils, and another for *Indian Ink*, Gum-Arabick powdered with white Sugarcandy, or for any thing else an Artist may have Occasion for in the painting Way.

In such a Case you may have thirty two sorts of Colour under very easy Command, besides other Necessaries : Then as a Cover to this, let there be a Piece of plain Ivory to open with an Hinge, that may serve as a Pallet, and all this will lie in a very narrow Compass ; nay, even though one was to add another piece of Ivory of half an Inch thick, to open below that of the Colours, to include a small pair of Compasses, a Port crayon, and some other such useful Materials for Drawing.

How to make Gum-water.

There remains now, only to mention the Way how to prepare Gum, Allum, and other Waters in the best Manner. To make Gum-water, take of the whitest Gum-Arabick one Ounce, of clear white Sugar candied, half an Ounce ; dissolve these in a Quart of clear Water, and add to it, if you will, a little Coloquintida. When your Gum-water is thus prepared, pass it easily through a fine Sieve, or a piece of Muslin, and keep it in a Bottle so stopped, that no Dirt may get in ; and as you want to use it, pour out a little at a Time ; for if this proves dirty or foul, it will spoil the Brightness of your Colours. The use of the Coloquintida is only to keep the Flies from spoiling your Work, if it should be exposed.

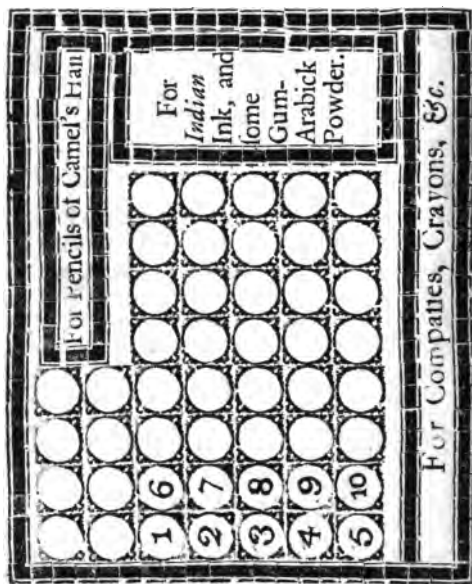
To make Allum-water.

Boil four Ounces of Allum in a Quart of Rain or River-water till the Allum is dissolved, and let it stand twenty four Hours.

Use of Allum-water.

With this water wash the Prints you design to colour, which will fix the Paper so, that the Colours will not sink or run in it when you lay them on, and will help likewise to brighten your Colours.

ers, to have always in their Pocket a small Case with Colours in it, about the bigness of a Snuff box, made of Ivory, about half an Inch thick, in which should be scooped several Concaves about half an Inch Diameter each, and as deep as the Ivory would bear, without going through : These Cavities may be placed as near one another as possible, and filled with Colours of several Sorts ; and as for the Liquid-colours, they will dry by being exposed to the Air, so that one may have them altogether in a few Days dry enough to be carried in the Pocket ; I shall suppose the Piece of Ivory disposed in the following Manner, *viz.*



In the foregoing Figure one may observe the Disposition of the several Cavities for the Colours in the Numbers 1, 2, 3, 4, 5, &c., and on one side a little Case for Pencils, and another for *Indian Ink*, Gum-Arabick powdered with white Sugarcandy, or for any thing else an Artist may have Occasion for in the painting Way.

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With this water wash the Prints you design to colour, which will fix the Paper so, that the Colours will not sink or run in it when you lay them on, and will help likewise to brighten your Colours.

If your Paper is very thin and loose, then let your Paper be washed with the above Water four or five Times, letting it dry between every Time, and your Paper must always dry before you lay any of your Colours upon it

But you must observe, that if you design to varnish your Prints after they are colour'd, then wash the Prints all over equally with white Starch before you colour them, and when that is dry, lay on your Colours.

To make Lime-water.

Lime-water is made by taking some unslackt Lime, and covering it an Inch with Water, and so letting it remain for twelve Hours, pour off the clear, and keep it for Use.

N. B. With this Water you may change your Sap-green into Blue.

Water made with Pearl-ashes.

Take about half an Ounce Pearl-ashes, and steep them twelve Hours in Rain or River-water, then pour off the clear, and that Water is excellent to use with Brasil-wood, in order to enliven its red Colour.

Size for for Water-colours.

Take the Cuttings of white Glover's Leather, boil them in common Water till the Liquor will jelly; you may prepare any Colour with this Size when it is warm, and it should always be used warm.

The Use of it is, that none of your Colours should shine by Candle light, as they would do if they were to be mixt with Gum water; therefore the Scenes of Play-houses are painted in Size.

THE
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OF
MINIATURE,

PART III.

Erected for the Instruction of the Ignorant,
the Improvement of Proficients and the general Information of such as are pleased with Pictures in small.

Herein are contained the most expeditious and infallible Ways of Drawing without being taught; and all the Methods of Colouring, Stippling, &c. Illustrated by Numbers of Practical Processes upon each Head or Article; particularly useful to those who would Copy in Colours from a Print.

To the Whole are annexed many valuable Receipts for preparing the Colours, which are peculiar to this Kind of Painting; communicated by the best *Italian* and other *Masters*. As also, the Preparation of an excellent *Polished Gold* and *Shell Gold*.

Published from an Old MSS.

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TO

ALL Connoisseurs and Artists
in Painting ; and particularly to the Fair Ladies who Understand and Practice in Miniature ;

*This most Valuable Piece is
offered as a Present every Way
worthy of their Acceptance and
Attention,*

By

Their most obedient Servant,

The Editor,

London, 1739.



A
T R E A T I S E
O N
M I N I A T U R E.



C H A P. I.

*Of the Methods of Drawing, Colours,
Grounds, &c.*

IT is not my design to make any Entomium on Painting. Many ingenious Men have done that Work to my Hands ; but tho' Miniature has been included in what they have said, I shall nevertheless specify the Characteristicks of this kind of Painting in particular.

1. It is in its Nature more delicate than any of the other sorts.

2. It requires to be beheld near at hand.

3. It cannot well be executed but in small,

4. It is perform'd on Vellum or Ivory.

5. The Colours are moisten'd with Gumwater only.

To succeed well in your Attempts this way, you should know how to draw very well ; but as most who concern themselves in this Art are but seldom skill'd in drawing, and yet would have the Pleasure of Painting without the Fatigæ of learning to Draw, in which no Progress is made, to speak of, but with Time and

PART III.

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much

help of a Mathematical Instrument, or Compass, as it is sometimes called, which is commonly compos'd of ten pieces of Wood like Rulers, about the sixth of an Inch thick, and half an Inch broad, and for their length it may be a Foot, more or less, according to the Size of the Piece you would copy. But that you may not mistake, here follows a Representation of it.



The Board, A, must be Deal, cover'd with a Cloth of some sort or other, for the more convenient fastening of the piece you would Draw, and what you would Draw upon. Then plant the Compass with a large pin run thro' the Foot B, If you would Draw in small, you must place the Original at the first Foot C, and the Vellum or Paper you would draw upon near to the Foot, B, removing it to a greater or less Distance according as you would have your piece greater or smaller.

To draw in great from small you need only shift your Copy to the Place of your Original, putting the former at C, and the latter at B ; and in each Case you must put a Crayon or Silver Pin into the Foot over your Vellum, and a Pin somewhat blunted, in the Foot over your Original, with which you are to follow all the Lines, while you bear, with your other Hand, gently upon the Pin or Crayon on your Vellum. If one or the other be well fitted in the Foot you need not bear thereon at all.

You may Draw also of equal size, but to do that you must plant your Compass in a different manner, it must be fix'd with a pin or Axis run thro' the Center D ; and the

the Original and the Copy must be at an equal Distance from the Center. In a word, you may Draw several Copies at a time, and each of a different size, or equal to each other, just as you shall please.

S E C T. VI.

These are all the Helps needful to be known by those who are unskill'd in Drawing. When your piece is sketched out upon the Vellum, you must with a Pencil of thin Carmine run over all the Strokes, that they may not be defac'd in working. This done, clean your Vellum with Crumb of Bread.

S E C T. VII.

Your Vellum must be glued to a Copper Plate or to a piece of thin Board, exactly of the same size with your intended piece, to stretch it upon; but your Vellum must be a Finger's breadth larger every way than what you glue it to, for your way is to lap it round behind and there glue it, not offering to lay any Glue under your Paint, not only for fear of some Deformity, but also because of the Impossibility of taking it off again. But first of all you must moisten the fair side of your Vellum with a piece of fine wet Linnen, and put a piece of white Paper to the back side of it, and so apply it to the Plate or piece of Board, and stretching it thereon equally in all Directions glue it as we just now directed.

S E C T. VIII.

The Colours us'd in Minature Painting are;

Carmine.	Black Lead:
Ultramarine.	Brown Red.
Lake of all sorts.	Gall Stone.
Vermilion.	Brown Oaker.
French Pink.	Spanish Brown.
Orpiment.	Umber.
Gumboge.	Bladder Green.
Naples Yellow.	Verditer.
Masticcoat Pale.	Sea Green.
Masticcoat Yellow.	German Ashes.
Indigo.	Plake White,
Ivory Black.	and
Lamp Black.	White Lead.

S E C T. IX.

As all Terrene Colours and other gross Substances are too coarse for fine Works, how well soever they may be ground, because of a kind of Sand which still remains ; you may separate the finest Particles by tempering your Colour in a Cup of Water. Having stirred it well with your Finger, and the whole being thoroughly soaked, let it subside for a little while, and then pour it off, by Inclination, into another Vessel, and what you pour off will be the finest Particles, which you must afterwards set to dry. The Colour thus prepared must, when you want it, be temper'd with Gum-water, as shall be said hereafter. This is a good Contrivance, and perfectly calculated for the Delicacy of small Works.

S E C T. X.

If you mix a little of the Gall of Ox, Carp, or Eel, but chiefly of this last, with all your Greens, Blacks, Greys, and Yellows, you will give them a Lustre and Vivacity not natural to them. You must take the Gall of Eels when they are skin'd, and hang them by a Nail to dry, and when you want any, you must steep it in Brandy, and mingle some of it with the Colour already tempered. It will cause the Colour to take to the Vellum more strongly, which it will not easily do when the Vellum is greasy ; again, the Gall prevents it from Peeling.

S E C T. XI.

There are Colours which purify by Fire, such as the Yellow Oaker, Brown Red, Ultramarine, and Umber ; all others blacken thereby : But if you burn the above-nam'd Colours with a strong Fire they change ; for the brown Red turns Yellow, the Yellow Oaker turns Red, the Umber reddens also, and White Lead becomes of a Lemon Colour, and is call'd Masticot. Observe, That the Yellow Oaker burnt becomes softer and kinder by far than before, and more so than the pure Brown Red : And reciprocally the Brown Red being burnt becomes more soft and agreeable than the pure Yellow Oaker ; they are both very good. The finest and most sincere Ultramarine burnt in a red-hot Shovel, becomes much more brilliant than before ; but, refin'd after this Manner,

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ner, it diminishes and becomes coarser and harder to work with in Minature.

S E C T. XII.

All these Colours are temper'd in small Ivory Cups, made on purpose, or in Sea Shells, with Water, in which have been previously dissolv'd Gum Arabic and Sugarcandy ; for Example, in a good Glass of Water put the Quantity of your Thumb of Gum-Arabic, and half that Quantity of Sugarcandy. This last prevents the Colours from scaling when applied, which they commonly do without it, or when the Vellum is greasy.

This Gum water you must keep in a neat Bottle always stopp'd up, and never dip a colour'd Pencil into it, but take it out with a Quill or some such thing.

Some of this Water you must pour into a Shell, together with the Colour you want, and temper them with your Finger till the whole be very fine. If you find your Colour too hard, leave it to soften in the Shell before you temper it, then set it to dry, and so do by all, except the Iris Green and Bladder Green and Gamboge, which must be tempered with Water only : But Ultramarine, Lake, and *Spanish* Brown must be more gumm'd than other Colours.

If you use Sea Shells, you must first soak them for two or three Days in Water, then scower them well in hot Water, to clear them of a certain Salt which spoils the Colours if not wash'd away.

S E C T. XIII.

To know if your Colours are sufficiently gumm'd, you need only make a Stroke with your temper'd Colours, upon your Hand, which will immediately dry : If they break and scale, they are too much gumm'd ; and if they rub out by passing your Finger across them, they have not enough. Again, if you lay your colours upon Vellum, and upon Trial find that the Colours come off upon your Finger like Dust it is a Sign they are not enough gumm'd, and therefore you must put more Gum into the Water you use : Take heed, tho', that you put not in too much, for that will have a hard and dry Effect, your Colours will be glutinous and shining : Thus
the

the more they are gumn'd the darker they are ; and if you would give a greater Body to a Colour than it naturally has, you need only Gum it well.

S E C T. XIV.

You must have a smooth Ivory Pallet, of the size of your Hand, upon which you must distribute the Colours for your Carnations or Flesh, after this manner : In the middle you must put a Quantity of White, well spread out, because it is the Colour most resorted to, and from the Left to the Right of it, along the side you must place the following Colours.

Masticoat,	A Blue, made of Ultra-
Orpiment,	marine, Indigo, and
Oaker,	White. It must be ve-
A Green, made of Ultrama-	ry pale.
rine,	Vermillion,
<i>French-Pink</i> , and White,	Carmine, and
equal Parts of each.	Black.

On the other side of your Pallet you must also spread out some White, as before ; and when you are to paint Draperies, or any thing else, you must, near it, put the Colour you intend to make them of, therewith to work as I shall instruct you hereafter.

S E C T. XV.

It is of great Importance that you should have good Pencils : When you chuse them, wet them a little, and twirl them upon your Finger ; if they keep their Point they are good, but if they break into many Points of different Lengths, they are good for nothing, particularly for * *Stippling*, but above all for Carnations. When they are too sharp pointed, with only four or five Hairs sticking out beyond the rest, you must blunt them carefully with a pair Scissars. It will be proper to have them of
two

* This is the Term in Minature for making of small Points or Dots

two or three Sizes; the largest may serve for your Grounds, the middling for Drawing and Colouring, and the least for Finishing.

To keep your Pencil to a good Point, you must often put it between your Lips, and press it, and moisten it with your Tongue, tho' you have just taken up Colour with it; for if you have taken up too much, you by this Means diminish it, and correct your Error. You need fear no Harm from doing of this; all the Miniature Colours (if you except Orpiment, which is a Poyson) have nothing displeasing to the Taste, or noxious in themselves, when prepar'd for use. You must be careful to repeat this very often when you are Stippling, or Finishing, particularly Carnations, that your Strokes may be neat and clear: As for Draperies and other Things, whether in the Drawing, Colouring, or Finishing of them, you need not be so nice; in this Case it will be enough if you make your Point upon the Edge or Rim of your Shell, or upon the Paper you rest on when you are at work.

S E C T. XVI.

To work as you ought, you must be in a Room that has but one Window, which you must place yourself very near to, with a Table and a Desk almost as high as the Window, and so fix yourself that the Light may always strike in on the Left Hand of you.

S E C T. XVII.

When you would lay on a Colour equally strong every where, as a Ground for Example, you must make your Mixtures in Shells, and take Care that you have enough for your Purpose; for if they fall short, you will be put to it to prepare them of exactly the same Degrees of Light or Shade.

S E C T. XVIII.

Having spoke of Vellum, Pencils, and Colours, let us now say how they are to be us'd. First of all, if you would paint Flesh or Drapery, or ought else, you must begin by sketching or drawing with large, bold, but clear, Strokes,

Strokes, like those who paint in Oil ; your Lights must, at first, be somewhat brighter, and your Shades not quite so dark as is required for Finishing ; because in stippling thereon you strengthen the Colour, which if too dark at first, would, in the finishing, become too deep.

S E C T. XIX.

There are several Ways of Stippling or Shading, as it may be also call'd ; every Painter has his Manner ; Some do it with round Points, others make them longish, others again hatch with fine Strokes crossing each other in all Directions, till the whole appears as if stippled or wrought with Points ; this last Method is the best, boldest, and soonest perfected, wherefore I advise all Miniature Painters to practise it, and to accustom themselves sometimes to be rich, mellow and soft in their Work, that is that the Points may be lost in the Ground they are wrought upon, and appear but just enough to evince that the Piece is stippled. Hard and dry is the reverse of this manner of working ; beware thereof : It proceeds from stippling with a Colour too dark for the Ground, and too dry a Pencil, which gives the Work a rude Cast or Favour.

S E C T. XX.

Endeavour also to drown your Colours into each other that no Line of Separation may be seen between them, and soften your Strokes with the Colours on each Hand of them, so as to be equally blended with and confounded into each.

S E C T. XXI.

When your Pieces are finish'd, heightening them a little has a fine Effect ; that is, strengthening the Lights with touches of a paler Colour than at first, which must be softened away into the rest.

S E C T. XXII.

When the Colours are dry upon your Pallet, or in your Shells, temper them with pure Water, and when you perceive they have lost their Gum, which you will know by their easily rubbing out, either on your Hand or Vellum, as I have said before, temper them with Gum-water till they are in good Order.

S E C T.

S E C T. XXIII.

There are several sorts of Grounds for Pictures and Portraits : some are quite brown with *Spanish Brown*, *Umber*, &c. with a little black and white ; others are more yellow, being mixed with a good deal of *Oaker* ; and others are upon the grey with *Indigo*. For this Work, make a Wash of the Colour or Mixture you propose, or according to the Picture or Portrait you are about to copy, and with this thin Wash soak or prime your Vellum : This done, lay it on thicker, and spread it out boldly, but uniformly, as fast as you can. never touching twice upon one Place till it be dry, because the second touch carries off what the first laid on, particularly if you bear a little hard upon the Pencil.

* S E C T. XXIV.

There are still other dark Grounds, and these are of a greenish Colour ; they are most in Use, and best adapted for all sorts of Figures and Portraits, because they set off the Carnations to great Advantage. and are very easily laid, there being no Occasion to stipple them, as must often be done to the others, which are seldom uniform at first ; whereas these hardly ever miss ; You must prepare them with Black, *French Pink*, and White mingled together in different Proportions, according as you would have your Ground lighter or darker : Lay it on thin at first, then thick, as before directed. You may mix up Grounds of other Colours, but these are the most common.

S E C T. XXV.

If you are about to paint a Saint upon one of these Grounds, and would make a small Glory round the Head of your Figure, you must lay on your Ground very thin in that part, or even leave it naked, especially just where the Glory ought to be brightest : At first lay on a pretty thick Mixture of White and a little *Oaker*, and as you move off from the Head, let your *Oaker* prevail more and more, and that it may die away into the Ground, hatch it boldly with a Pencil ; and as you pursue

hue the round of the Glory, take sometimes the Colour of the Glory, and sometimes that of the Ground, mixing some white or Oaker when it is rather too dark, and this continue till they are utterly confounded or scumbled into each other, and that no separation between them be distinguishable.

S E C T. XXVI.

To make a Ground all of Glory, you first lay on a bright Mixture of a little Oaker and White, adding more and more of the first as you draw more and more towards the Extremities of the intended Picture; and when the Oaker happens not to be dark enough, (for you must go on darkening and darkening) add Gall stone, then Carmine, and at last *Spanish Brown*. This Ground you must lay in such manner that the different Degrees of Darkness may, as much as possible, insensibly increase and strengthen. Then you must stipple the Whole with the same Colours to blend it nicely together, which is tedious and difficult enough; particularly when there are Clouds of Glory in your Ground. You must strengthen their Lights as you remove from the Figure, and finish still with stippling, swelling out the said Clouds, whose Lights and Shades must be imperceptibly lost into each other.

S E C T. XXVII.

For a Day-sky you must mingle some Ultramarine with a great deal of White, and lay it on as smooth and uniform as possible, with a large Pencil and broad Strokes as for Grounds, laying it on paler and paler as you descend towards the Horizon, which you must make of Vermillion and Mine de Plomb, and of White of the same Strength as finishes the Sky, and even a little weaker, artfully blending the Blue and the Red, which must come down to the Front, mingling, at last, Gall-stone and a good deal of White, so that the Mixture may be paler than the first; and all this must be so laid on, that no Separation be seen of the Colours of this Sky.

S E C T. XXVIII.

When there are to be Clouds in your Sky, you need lay on no Blue where they are to be, but sketch them
out

out (if they are Reddish) with Vermillion, Gall-stone and White, together with a little Indigo; and if they happen to be darker, you must use a great deal of this last, making the Lights of one and the other with Masticoat, Vermillion and White, the Proportions of each more or less, according to the Degree of Strength you would give them, or according to the Original before you, swelling out the whole with stippling, for it is a hard Matter to lay them on uniformly in the Drawing; and if the Sky be not sufficiently uniform, you must stipple that likewise.

N. B. You may cover also the Places of your Clouds in laying on the Ground of the Sky, heightening the Lights with a good deal of White, and deepening the Shades: This is the most expeditious Way.

S E C T. XXIX.

A Night or stormy Sky is made with Indigo, Black and White, mix'd together, which is laid on like the Day Sky. To these add Vermillion, Oaker and Brown Red for the Clouds, whose Lights must be of Masticoat or Mine de Plomb, and a little White, sometimes Redder and sometimes Yellower, as Necessity shall require: And when it is a stormy Sky, and that in some parts you see Lights, whether Blue or Red, you may order them as in a Day Sky, scumbling the whole together in drawing and finishing.



C H A P. II.

D R A P E R I E S.

S E C T. I.

TO make a blue Drapery, put Ultramarine near the White on your Pallet, and mix them in such Proportions as to produce a very pale Colour, and of a good Body. With this you may express your brightest Lights;

Lights ; and afterwards add more Ultramarine for such as are darker, and so continue to do to the deepest Fold and darkest Shades, which must be pure Ultramarine ; and all this must be done with broad Strokes of the Pencil, with a due Regard had to the scumbling of the different Degrees of Light and Shade, losing the Lights into the Shades with a Colour not so pale as the Lights, or deep as the Shades. Then stipple the whole with the same Colours and the same Degrees, but somewhat strongly, that the points may be seen : The whole must flow imperceptibly together, that the Folds may not appear cut, and no Line of Separation be seen. When the Ultramarine happens not to be dark enough for the deepest Shades, how much soever it may be gummed, you may mix Indigo with it to give them the last Degree of Depth ; and if the Lights are not strong enough, they may be heighten'd with White and a very little Ultramarine.

S E C T. II.

A Carmine Drapery is done after the same Manner with the Blue, except that in the darkest places you lay on Vermillion before you use the Carmine, which is apply'd without any White, and in the deepest shades it must be well gumm'd. To deepen it the more add a little Bistre.

S E C T. III.

There is also another Drapery all of Vermillion, with a Mixture of White for the Lights, laying it on single upon the darkest parts, and adding Carmine for the deepest Shades. You finish then with the same Colours, as in other Draperies ; and if the Carmine and Vermillion together are not strong enough, take Carmine alone, but only for the deepest shades.

S E C T. IV.

A Drapery of Lake is done like that of Carmine, mixing a good deal of White therewith for the Lights,
and

and but very little for the shades : You are to finish with stippling, but we use no Vermillion.

S E C T. V.

Purple Draperies are made by the same Rule, having first prepar'd a Mixture of Carmine and Ultramarine, and continually using White for the Lights. If you would have it a Columbine or light Purple, your Carmine must be in greater Quantity than your Ultramarine ; but if you would have it more blue and deep, let there be more Ultramarine than Carmine,

S E C T. VI.

For a Flesh-colour Drapery begin with laying on a very pale Mixture of White, Vermillion and Lake, and shade with the same Colours, diminishing the Quantity of the White. This Drapery must be very pale and delicate, because it must represent a slight Stuff, and even the shades must not be dark.

S E C T. VII.

For a Yellow Drapery lay on all over, first Masticcoat, and then over that Gamboge, excepting only the lightest parts, where you must leave the Masticcoat pure. Then you must shade with Oaker mingled with a little Gamboge and Masticcoat, increasing and decreasing the Quantity of this last, according to the strength of your shades ; and when you want to be still darker, add Gall-stone. Moreover you may work with Gall-stone alone for the deeper shades, adding thereto Bistre if it be not dark enough. You finish with the Colours you began with, stippling and blending the Lights with the shades.

S E C T. VIII.

If you use Naples Yellow or French Pink instead of Masticcoat and Gamboge, you will have another sort of Yellow.

S E C T. IX.

Green Drapery is produc'd by colouring all over with
Verditer,

Verditer, with which, if it prove too blue for you, you may mix Masticpat for the Lights, and Gamboge for the shades : Then add a Proportion of Sad Green to shade with ; and as your shades grow very deep, you must add the darker Greens, and even use them unmix'd, where you want to be extremely dark. You finish with the same Colours, a little darker than at first.

S E C T. X.

For a Black Drapery, you must lay on Black and White, and finish with the same, encreasing the Black as you want it for the shades ; for the deepest of which add some Indigo, especially if you would give your Drapery the look of Velvet. You may in all Cases touch up your Lights with a brighter Colour.

S E C T. XI.

For Drapery of White Woollen Cloth, lay on a Mixture of White, a very little Oaker, Orpiment, or Gallstone, to give it a yellowish Cast, then shade and finish with Blue, a little Black, White, and Bistre mix'd together, adding this last for your brownest shades.

S E C T. XII.

A light Grey is laid on with Black and White, and finish'd with the same, made a little darker.

S E C T. XIII.

For a minim, dark, brown, tawney, or dun Drapery, lay on Bistre with White, a little Brown Red, and shade with the same Mixtute, but let it be a little darker.

S E C T. XIV.

There are other sorts of Draperies, call'd Changeable, because the Lights are of one Colour, and the shades of another ; these are us'd for the Cloathing of Angels, and for other young and gay Figures, as also for Scarves, and other light parts of Dress, which fall into a Number of Folds and flow to the Wind. These are most commonly

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commonly Purple, and of these there are two sorts, the one with blue Lights and the other with Yellow.

S E C T. XV.

For the former lay on Ultramarine and White very pale for the Lights, and shade with Carmine, Ultramarine, and White, the same as for a purple Drapery, so that only the very brightest Lights appear Blue, and even then you must stipple with Purple, with a large Quantity of White, and scumble the whole artfully together.

S E C T. XVI.

For the latter, use Masticoat for your Lights, instead of Blue, then proceed as for a Drapery of pure Purple, except that you must stipple and blend the Lights with the Shades, that is the Yellow with the Purple, by the help of a little Gamboge.

S E C T. XVII.

Carmine Red is order'd like this last, that is, the Lights must be Masticoat, and the shades Carmine, and to scumble them, you must use Gamboge.

S E C T. XVIII.

Lake Red like Carmine,

S E C T. XIX.

Green must be order'd in the same manner as Lake, continually mixing Verditer with the sadder Greens for the middling shades.

S E C T. XX.

Many other Sorts of these may be contriv'd at Pleasure, keeping to the Union of the Colours, not only in one Figure, but also in a Group of several Figures, avoiding, as much as the subject will permit, to put Blue next to a Flame Colour, or contrasting Green with Black, and so of others that disagree or afford no proper Union.

S E C T.

S E C T. XXI.

Other Draperies may be made of sad, dirty, and brown mixtures and simples ; and all by the Directions we have already given ; and others also may be contriv'd, both of broken and complicated Colours, but a Harmony between them must be preserv'd, that they do not offend the Eye. There is no laying down a Rule to guide you in this ; you must by Experience and Practice, make yourself acquainted with the Power and Effect of your Colours, and work accordingly.

S E C T. XXII.

Linnens are painted thus : Having drawn your Folds as when you do Drapery, lay on White all over, and then proceed and finish with a mixture of Ultramarine, black and white, taking more or less of this last according to the degrees you want of Light and Shade ; and for the deepest Folds, take Bistre and a little White, using it sparingly and with artful Touches : and you may even take the former pure for the deepest shades, where you must express the Folds and lose them into the rest.

S E C T. XXIII.

They may be made after a different Manner, by laying on all over, a very pale Mixture of Ultramarine, black, and white, and then proceeding in the manner above directed with the same mixture, but a little deeper. And when the shades are stippled and finish'd ; you must heighten the Lights with pure White, blending them with the first Colour or Ground. But of what sort soever you make them, you must, when they are finish'd, prepare some yellowish Tints for certain Places, laying them on lightly, as it were a Wash, so as to be transparent, and neither to hide the stippling nor the shades.

S E C T. XXIV.

Yellow Linnens are made of White mix'd with a little Oaker, then proceed and finish with Bistre, mixed with

with White and Oaker, and for the deepest shades with Bistre alone. Before you finish, lay on Tints of Oaker and White here and there, and others of White and Ultramarine, as well upon the shades as the Lights, but very thin, and then stipple and scumble the whole together, and it will have a fine Effect. As you finish, touch up the Extremities of the Lights with Masticcoat and White. These Linnens, and the former, you may stripe like *Egyptian* Scarves, with Blue, Red, Ultramarine, and Carmine, a Red one between two Blue ones, very bright on the Lights, and stronger in the shades. The Heads of Virgins are generally dress'd with Veils of these Sorts, and of the same are made a Sort of Handkerchiefs for an open Breast, because they are very becoming to the Flesh.

S E C T. XXV.

When you would have either the one or the other of them to be transparent, and shew whatever, whether Stuff or Flesh, is underneath, lay them on at first, very thin, and mingle with your shading Colour, a little of that which is under them, particularly at the Extremities of the shades, and touch only the Extremities of the Lights, [only for the Yellows] with Masticcoat and White, and for the Whites with White alone.

They are also to be made another way, especially when you would have them quite transparent, as Muslin, Lawn, or Gauze. To this purpose you must begin and finish what is beneath as if nothing was to be over it; then heighten the brightest Folds with White or Masticcoat, and shade with Bistre, and White; or Black, or Blue and White, according to the Colour you aim at, and taking away from the Liveliness of the rest by soiling it over, tho' that be not altogether necessary but for the darker parts.

S E C T. XXVI.

For Crape you must do as above, only observe that you draw the Folds and the Borders or Edges with little Threads alone, upon what is beneath, which must first be finish'd,

S E C T.

S E C T. XXVII.

When you would water a Stuff of any sort, you must wave it with lighter or darker Colours, according as what you are upon is Light or Shade.

S E C T. XXVIII.

There is such a way of touching your Draperies, so as to distinguish the silken from the woollen; these are more coarse and stiff, the others are finer, and more free or glossy; but it must be remember'd that these are Effects which depend partly upon the Stuff itself, and partly upon the Colour of it; and in order that you may apply them in such a manner as shall be agreeable to the Subject and to the Distance, I will here dwell a little on their different Qualities.

S E C T. XXIX.

We have no Colour that partakes more with Light than White, or that comes nearer to the Air, which shews it to be weak and fading, nevertheless you may use it for the nearest Parts of your Picture, or bring it out towards you, by the Assistance of some heavier and stronger Colour, or by mingling them together.

S E C T. XXX.

Blue is the most fading, or rather the weakest Colour of all, whence the Sky and distant Prospects are of that colour: but it will fade the more, the more it is mix'd with White.

S E C T. XXXI.

Pure Black is the heaviest and the most terrene of all, and the more you mix it with other colours, the more will they be of the same Nature.

Now the different Natures of Black and White produce different Effects in them; for often the White throws back the Black, and the Black brings forward the White. Under White, we here comprehend all the
light;

light colours, and under Black we suppose all that are heavy.

Ultramarine is then a colour weak and light.

Oaker is not quite so much.

Mastigoat is very light, and so is Verditer.

Vermillion and Carmine are next to them.

Orpiment and Gamboge are a little less so.

Lake holds a mean more kind than rude.

Pink is of no particular Class, and easily takes the Qualities of the others; so you may make it dark and heavy, by mixing it with Colours which are so: And on the contrary, faint, weak, or fading, by mingling with it White or Blue.

Brown Red, Umber, the dark Greens, and Bistre, are the heaviest, and next to Black.

S E C T. XXXII.

Able Masters who are vers'd in Perspective and the Harmony of Colours, take care always to use their strong Colours, for their fore Grounds, and the weaker for distant Views. As for the Union of Colours, you may, by mingling them together, understand the Friendship or Averfion they have for each other, and thence take your Hints, and consult the Pleasure of the Eye.

S E C T. XXXIII.

For Laces, Point, and the like, lay on first a Mixture of Blue, Black, and White, as for Linnens; then heighten the Pattern, Flowers, or Flourishes with White only; then shade and finish with the first Colour. When they are upon Flesh, or ought else which you would have to be seen through them; finish what is under them, as if you intended to lay nothing thereon, and then lay on the Lace or Point, with pure White, and finish with the other Mixture.

S E C T. XXXIV.

If you would paint a Fur, lay on a Ground, as for Drapery, according to the Colours of it, and then shade

by the same Rule; and having done, you must, instead of stippling, draw fine strokes, this way, that way, and t'other way, according to the Grain of the Fur you aim at. Heighten the Lights of a Brown Fur with Oaker and White, and those of a light Fur, with White and a little Blue.

S E C T. XXXV.

For a Building, if it be Stone, take Indigo, Bistre, and White, for your dead colouring or ground, and then shade with less of this last, and more of the Bistre than Indigo, according to the Colour of the Stones you would make; you may also add a little Oaker, both to begin with and to finish. But to add still to its Beauty, you must here and there, especially for Ruins, make yellow and blue Tints, the former of Oaker, and the latter of Ultramarine, always mixing them with white, whether for your first Ground, provided they appear through what you lay upon them, or whether you use them at last, finishing and blending them with the rest.

S E C T. XXXVI.

For wooden Buildings, as they are of very different Kinds, they are left to Discretion; but the most common way is to begin with a Mixture of Oaker, Bistre, and White, and finish without White, or with very little, and when the shades require Strength, with Bistre alone. For others you may add, sometimes Vermillion, and sometimes Green or Black, in a Word, according to what you intend, you must mix your Colour, and finish with stippling, as for Draperies and all the rest,



C H A P. III.

Of Carnations or Flesh Colouring,

S E C T. I.

TH E R E is so great a Variety of colouring for Flesh, that it is a hard matter to lay down any general Rules for your Instruction therein ; nor are any Rules minded by such as have acquired a Skill this way ; for such copy from Originals, or work by their own Heads, without knowing, particularly, why or wherefore. So that the most able Hands, who work on with the least thought and trouble, would be so much the harder put to it, were they called upon to assign a Reason for their Doctrine and Practice as to their Colouring and Tints.

However, as Beginners, for whom this little Work is intended, stand in need of immediate Instruction, I will here, in general, declare how you are to paint the different sorts of Flesh.

S E C T. II.

First of all, having drawn your Figure with Carmine and adjusted your Piece, you must lay on, for Women, Children, and, in general, for all soft and tender colouring, White mix'd with a very little Blue for Faces, the Composition of which will be given hereafter ; but it must hardly appear.

S E C T. III.

And for Men, instead of Blue substitute Vermillion for your dead colouring, and when they are old let it be mix'd with Oaker.

S E C T. IV.

Then you are to run over all your Features with Vermillion, Carmine and White mingled together, and with the same Mixture form all the shades, adding White as they weaken, and scarce using any of it as they strengthen; but particularly in certain Places, where you must lay it on boldly, for Example, at the Corners of the Eyes, under the Nose, the Ears, under the Chin, between the Fingers, in all the Joints, the corners of the Nails, and generally in every part where it is necessary to express a Separation in the dark shades: Nor must you fear to give them all the strength they ought to have from the first Sketch, because in working thereon with Green, it constantly weakens the Red which had first been laid on.

S E C T. V.

Having drawn with Red, make blue Tints with Ultramarine and a good deal of White, upon the Temples, beneath and at the Corners of the Eyes, on each side of the Mouth, above it and below it, a little upon the middle of the Forehead, between the Nose and the Eyes, on the sides of the Cheeks, on the Neck, and other parts where the Flesh has a bluish Cast.

You must also make yellowish Tints with Oaker, Orpiment and a little Vermillion mixed with White, above the Eye-brows, at the sides of the Nose towards the bottom, a little beneath the Cheeks, and the other parts near.

In these it is that you must keep a watchful Eye upon Nature, for Painting being no more than an Imitation of Nature, every Deviation from her is a Blemish, and truly a Fault.

S E C T. VI.

Having now coloured, drawn, and disposed of your Tints, you must proceed to shade, stippling with Green for your Flesh, mixing therewith, according to the Rule we have given for Tints, a little Blue for the fading Parts,
and

and on the contrary, a little Yellow for the stronger parts, or such as are nearest to you. On the Extremities of the shades next to the Lights, you must imperceptibly blend your Colour with the Ground of the Flesh, first with Blue, and then with Red, according to the part you are upon. And if this Mixture of Green do not darken enough at first, you must go over the shades at several Repetitions, sometimes with Red sometimes with Green, and always stippling till the whole be as it ought to be.

S E C T. VII.

And if with these Colours you cannot give your shades all the Strength they ought to have, you may finish the darkest parts with Orpiment, Oaker or Vermillion, and sometimes with Bistre only, according to the colouring you would make, but lightly, laying it on very thin.

S E C T. VIII.

You must stipple upon the Lights with a little Vermillion or Carmine, mixed with a good deal of white and a very little Oaker, to lose them with into the shades, and make the Tints imperceptibly die away into each other, taking heed while you are stippling or hatching that your strokes follow the out-line of the Flesh; for altho' your hatching must cross in all Directions, that ought to appear a little more, because it rounds off the parts.

And because this Mixture might make the colouring too Red if it was always used, you must moreover endeavour to confound the Tints and the Shades with Blue, a little Green, and a great deal of White, so that it be very pale; but with this you must not work upon the Cheeks, nor upon the Extremities of the Lights, no more than with the other Mixture upon these last, which are to be left in all their brightness, as certain parts of the Chin, of the Nose, upon the Forehead, and upon the Cheeks, which, and the Chin, ought, however, to be redder than the rest,

rest, as well as the Feet, the inside of the Hands, the Fingers, and the Toes.

Pray observe here, that these two last Mixtures ought to be so very pale, that you should hardly see yourself work, they being purely designed to soften the Piece, to melt the Tints into each other, to blend the shades with the Lights, and to deface the Lines. Be cautious not to make much use of the red Mixture upon blue Tints, nor of Blue upon others; but change colour from time to time, as you perceive you work too blue or too red, 'till the Piece be finish'd.

S E C T. IX.

You must shade the White of the Eyes with the same Blue and a little Flesh Colour, and make the Corners on the sides of the Nose with Vermillion and White, with a small stroke of Carmine. All this is softened with that Mixture of Vermillion; Carmine, and White, and a very little Oaker.

The Iris of the Eye must be a Mixture of Ultramarine and White, this little more in Quantity than the other, adding thereto a little Bistre, if it is to be of a Kind of light Hazel, or a little Black if it is too Grey. The Pupil or Sight of the Eye is done with Black, and the Iris is shaded with Indigo, Bistre, or Black, according to the Colour it is of; but of what colour soever it is, you would do well to draw a fine Circle of Vermillion round the Sight, which blended with the rest, in finishing, gives Life to the Eye.

The Circumference of the Eyes, that is, the Slit and the Lashes, must be done with Bistre and Carmine, when they are strong. particularly the upper part, which must be afterwards softened with the Red or Blue Mixtures, I formerly mentioned, that the whole appear of a Piece and continu'd.

When this is done, give a small Touch of pure White upon the Sight of the Eye, next to the Light, which makes it shine and alive.

You may also heighten the White of the Eye next to the Light.

S E C T. X.

The Mouth must be Vermillion mix'd with White, and finish'd with Carmine, which is softned like the rest : And when the Carmine, does not prove dark enough for your purpose, mix Bistre with it : This is to be understood of the Corners, between the Lips, and particularly for some half open Mouths.

S E C T. XI.

The Hands and the other Nudities are to be done as the Faces, observing that the Tip or End of each Finger be redder than the rest. Your work being colour'd and stippled, you must go over all the Separations of the Parts with fine Touches of Carmine and Orpiment together, as well in the Shades as in the Lights, but stronger in the first ; and then handle them away into the rest of the Flesh.

S E C T. XII.

The Eye-brows and the Beard, are colour'd like the Shades of the Flesh, and are finish'd with Bistre, Oaker, or Black, according to the colour they are of, drawing them with fine strokes as they ought to lie, in exact imitation of Nature ; and the Lights must be heighten'd with Oaker, Bistre, a little Vermillion, and a good deal of white.

S E C T. XIII.

For Hair, lay on Bistre, Oaker, White, and a little Vermillion, but when it is very dark you must use Black instead of Oaker, and then shade with the same Mixture, diminishing from the white, and finish with Bistre alone, or mix'd with Oaker or Black, by fine thin Strokes, very near to each other, waving and curling them according to the turn of the Hair. You must also refresh the Lights, with fine Strokes of Oaker, or Orpiment, or White, and a little Vermillion ; after which blend away the Lights into the Shades, working sometimes with brown and sometimes with pale.

As for the Hairs upon and round the Forehead through which the Flesh is seen, you must colour them with the Colour of Flesh, shading and working beneath as if you intended there should be none ; then shape them, and finish them with Bistre, and refresh the Lights as you did the rest.

Grey Hairs are colour'd with White, Black, and Bistre, and finished with the same Mixture, but stronger, heightening the Lights with a very pale blue and white.

S E C T. XIV.

But the Matter of the greatest Importance is to soften the Work, to run the Tints into one another, as well as the Hair on and about the Face into the Flesh, taking especial Care that you work not dry or hard, and that the Out lines of your Flesh be not cut.

You must accustom yourself to mix with White, but just as you want more or less of it, for the second colouring must be always a little deeper than your first, except it be for softning.

S E C T. XV.

The various Colourings may be easily produc'd by taking more or less Red, Blue, Yellow, or Bistre, whether for your first colouring or for finishing. The Colouring for Women should be bluish, for Children a little Red ; both Fresh and gay ; and for the Men it should incline to Yellow, especially when they are old.

S E C T. XVI.

To make a Colouring to represent Death, you must first clap in White, Orpiment, and Oaker, very pale, and then proceed with Vermillion and Lake, instead of Carmine, and a great deal of White ; and work thereon with a green Mixture, in which is more blue than of any other Colour, that the Flesh may be livid. The Tints must be the same as for another Colouring ; but you must have more of them blue than yellow, particularly
for

for the retreating Parts, and about the Eyes ; and the Yellow must be us'd only for the Parts which advance the farthest out. They are made to die away into each other, after the usual manner, sometimes with a very pale blue, and sometimes with Oaker and White, and a little Vermillion, softning the whole together. You must round off the Parts and the Out-lines with the same Colours.

The Mouth must be almost a Purple ; but nevertheless you begin upon it with a little Vermillion, Oaker and White, but you finish it with Lake and Blue ; and for the strong Strokes you take Bistre, and Lake, which are used also for the Eyes, the Nose and the Ears

If it is a Crucifix or some Martyr, where there must be an Appearance of blood ; after the Flesh is finished you must colour with Vermillion and finish with Carmine, swelling out the Drops of blood, and giving them a roundness.

As for the Crown of Thorns, lay on Sea-green and Masticcoat, and shade with Bistre and Green, and refresh the lights with Masticcoat.

S E C T XVII.

Iron is coloured with Indigo, and a little black and white, and finished with Indigo alone, heightening with white.

S E C T. XVIII.

For Fire and Flames, the lights must be Masticcoat and Orpiment, and for the Shades, mix Vermillion and Carmine.

S E C T. XIX.

Smoke is imitated with Black, Indigo, and White, and sometimes Bistre. You may also add Vermillion, or Oaker, according to the Colour you would have it of.

S E C T. XX.

For Pearls, lay on a Mixture of White and a little blue, and shade them and swell them with the same, but a little stronger. Lay on a small white Spot just in the middle of the light Side, and on the other, between the Shade and the Border of the Pearl, give a touch of Masti-coat to make a Reflection ; underneath you must give them a cast of the Colour they are upon.

S E C T. XXI.

Diamonds must be laid in quite Black, then heightened with gentle touches of White on the light side.

The same must be done for all other precious Stones, only varying the Colour.

S E C T. XXII.

For a Gold Figure, lay on Shell Gold, and shade with Gall stone.

Do the same for Silver, only shade with Indigo.

S E C T. XXIII.

Thus have I dwelt upon some small Articles for the Assistance of Beginners. What I have said may afford some light into what I have not said, by the help of Time and Practice, which are much required to attain any degree of Perfection in our Art. One excellent way to become a Master is copying after well-chosen Originals : It is with Pleasure we reap the Fruit of the Labours of others. Much is required to be able to produce such fine Effects : In short, it is far better to be a good Copist than a bad Inventor.

The Instructions I have laid down for the Mixtures, and the different Tints, for the finishing of Flesh and other Things, may be of particular Use when you work after Prints, where you have nothing before you but black and white ; and they will not be much more un-useful when you begin to copy after Paint, tho' you know not how to handle your Colours, and happen not to be acquainted with their Power and Effect ; For there

is this difference between Miniature and painting in Oil, that in this last the Colours were taken off from the Pallet just as they appear to you in the Picture ; so that in this Case you have nothing to consult but such a light and such a shade. Now it is far from being the same in Miniature, where often it happens that the last colouring you lay on does not preserve its colour, but partakes of the colouring beneath, or rather, the one than the other compose a new one to form the Effect you aim at : For altho' it be White, Green, Carmine, Blue, Orpiment, Bistre, and the like, which form your colouring, they nevertheless would not produce it if they were mixed together ; for it is by proceeding from one to the other, that you can succeed ; and when you have a piece of this Kind before you without having seen how it was done, you must be a Conjuror, at least, to guess at the Order and Method it was done in, without the help of a Master or a Book. Upon this Consideration, I have applied my self to instruct you in so many small Matters, and I flatter my self that Experience will evince to all such as are able to make Use of them, that as small as they are, they are valuable.



CH A P. IV.

Of LANDSCAPES.

S E C T. I.

IT is particularly for Landscapes that you must be mindful of the 58th Article, and of the following, which speak of the various Qualities of Colours, because the Order and Disposition of them contributes much to the Retreats and Distances which deceive the Eye : And the greatest Masters in this branch of the Art have ever observed to cover their fore Fronts with the heaviest and strongest Colours, reserving the lighter for Distances.

But

But that I may not err from my purpose, I will, instead of general Instructions, endeavour to give beginners some particular Documents to be observed in Practice.

S E C T. II.

First of all, having drawn your Landscape such as you would have it, as for another Picture, you must colour your nearest Fronts, if they are to be dark, with Sap Green, Iris Green, Bistre, and a little Verditer, to give your Colour a Body. You must stipple with this Mixture, but let it be a little darker, adding thereto, sometimes, black.

For the lighter Fronts, lay on Oaker and White, then shade and finish with Bistre: In some you should mingle a little Green, especially for shading and finishing.

Sometimes you have reddish Fronts, which must be made of Brown-red, White, and a little Green, and finished with the same, with the Addition of a little more Green.

For Grass and Herbage on your nearest Fronts, you must, after they are drawn, colour them with Sea Green, Verditer, and a little White; and for such as are yellowish, you must mingle Masticot, and then shade with Iris Green, or Bistre, and Gall-stone, if you would have them appear dead and withered.

The Fronts at some distance must be coloured with Verditer, then they must be shaded and finished with Sap Green, and add Bistre to give a touch with here and there.

Such as are still farther off are made of a Sea Green, a little Blue, and a little White; and are shaded with Verditer.

The further they are off, the more bluish they must be; and the utmost Verge should be Ultramarine, and White, mixing in certain Places fine Tints of Vermillion.

S E C T. III.

Waters are painted with Indigo and White, and shaded with the same, but it must be stronger; and to finish them

them you must, instead of stippling, draw waving Strokes when necessary, or strait without crossing, for a still Water. You must sometimes use a little Green, and heighten the Lights with pure White, particularly where the Water bubbles up.

You must proceed with Rocks as with Stone Architecture, except that you mingle a little Green in your colouring and shading. In this Case your Tints must be yellow and blue, and in finishing must be scumbled into the rest : And when you make little branches with Moss on them, or Herbs of any sort, you must, when you have done, touch them up with Masticcoat and Green. You may make some Yellow, some Green, and some Reddish, as upon the near Fronts. Rocks must be stippled like the rest ; and the farther they are off, the grayer must they appear.

Castles, old Ruins, and buildings of Stone and Wood, must be ordered as I have already directed, when they are upon the fore Fronts ; but when they are at a Distance, you must add Brown Red and Vermillion, with a great deal of White, and shade very tenderly with this Mixture ; and the farther they are off, the tenderer must the Strokes be for the Separations. As they are generally slated you may make the Roofs a little bluer than the rest.

S E C T. IV.

The Trees are not touched till the Sky is finished ; so that when you are about the Sky, you may, if you will leave room for them, especially if they are to be many in Number. But which way soever you order this, you must cover such as are nearest to you with Verditer, adding, sometimes, Oaker to it ; then shade with the same Colours and a little Iris Green ; then leaf them with stippling without crossing ; for it must be done with slight longish touches, of a darker and warmer Colour, which must all be directed to humour the Branches, by little Tufts of a somewhat darker Colour, as we have said. Then touch up the Lights with Verditer and Masticcoat, forming your Leaves after the same Manner ; and when there are withered Leaves or Branches, cover them with
Brown-

Brown red, or Gall-stone and White, and finish with Gall-stone without White, or Bistre.

The Trunks of Trees must be cover'd with Oaker, White, and a little Green for the Lights; and for the Shades, mingle with Black, adding Bistre and Green for the one and for the other. Your Tints must be yellow and blue; and here and there you must bestow tender touches of White or Masticoat, to imitate what you commonly see in the Bark of Trees.

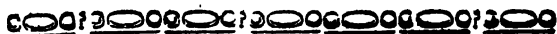
The Branches which appear between the Leaves must be Oaker, Verditer and White, or Bistre and White, according to your degree of Light. You must shade with Bistre and Iris Green.

Trees at a Distance are covered with Verditer and Sea-green, and are shaded and finish'd with the same Colours mixed with Iris Green. When there are any that appear yellowish, they may be cover'd with Oaker and White, and finish'd with Gall-stone.

For those at the greatest Distance, and very far off, cover with Sea-green, and, to finish, mix with it Ultramarine; heighten the one and the other with Masticoat in little distinct Leaves.

It is the most difficult Thing in Landscape Painting, and likewise in Miniature, to leaf a Tree as it ought to be. To obtain this Art you must break your Hand to it a little by copying good Originals; for it requires a peculiar Manner of touching, which cannot be attained but by working after Trees themselves, around which you will take care also to have little Branches or Sprays, which you must leaf upon whatsoever they happen to lye, whether the Sky or the Ground of the Landscape in general.

And in general your Landscape must be properly colour'd, and full of Truth, for therein consists its beauty.



C H A P. V.

OF FLOWERS.

S E C T. I.

IT is most charming to paint Flowers, not only because of their Lustre, but also because they take up but a little Time, and require hardly any Pains to do them : It is all Pleasure and no Trouble. You spoil a Face if you make one Eye a little higher than the other, if you make a small Nose or a large Mouth, and so on of the other Features : But the fear of these disproportions never troubles the Mind when you are about Flowers ; for except they be quite out of the way indeed you spoil nothing ; and accordingly most of the Quality who apply themselves to painting, concern themselves with nothing but Flowers. You must, however, learn to copy a little exactly ; and for this Branch of Miniature, as well as for the rest, I refer to Dame Nature as your only Guide. Work then after natural Flowers, and search for their Tints and various Colours upon your Pallet ; a little Use will easily bring you to be expert in this ; and in order to pave the way for you at first, I will shew you, continuing my Design, how to paint some of them. It is not always you can have natural Flowers, and you may be often obliged to copy from Prints where you see nothing but Graving.

S E C T. II.

It is a general Rule that Flowers be drawn and covered like other Figures ; but the manner of colouring and finishing them is different ; for they are coloured with broad Strokes or Touches, which have the turn the smaller must have, with which you finish, this first turn being a principal help. And to finish, instead of stippling or hatching, you draw fine Strokes very close to each

each other without crossing, going over them at several Repetitions, till your Lights and Shades have all the Strength you would give them.

S E C T. III.

R O S E S.

Having calked and drawn the red Rose with Carmine, let your first Lay be a very pale Mixture of Carmine and White ; then lay in the Shade of the same Colour, but with less White, and at last use Carmine alone, but it must be very thin at first, adding, however, to the body of it more and more, as the piece advances, and that the shades grow darker and darker, and this is to be done with broad bold Strokes. To conclude, you finish with the same Colour, with fine Strokes, which must be turned like those of the Graving, if you copy after a Print, or like the turn of the Leaves of the Rose, if you copy after a Painting or Nature ; scumpling the whole, and touching up the strongest Lights, and the Edges of the brightest Leaves, with White and a little Carmine. You must always make the Heart of the Rose, and the shady Side, darker than the rest, and use a little Indigo in shading the first Leaves, especially when your Roses are blown, to make them appear a little fading. The Seed is done with Gamboge, mixed with a little Bladder Green for shading.

Your streaked Roses must be paler than the others, that the Streaks may be the more conspicuous ; which must be done with Carmine, somewhat deeper in the Shades, and very bright in the Lights, hatching continually with fine Strokes.

For white Roses lay on white, and proceed and finish as in the Example of red Roses ; but with Black, White and a little Bistre, and make the Seed somewhat yellower than before.

For yellow Roses lay on Masticoat, and shade with Gamboge, Gall-stone and Bistre, heightening the Lights with Masticoat and White.

The Stalks, the Leaves, and the Buds of all sorts of Roses, must be laid in with Verditer, mixed up with a
little

little Masticbat and Gamboge; and to shade them, use Iris Green, with less of the other Colours when the shades are deep. The wrong Side of the Leaves must be bluer than the other, therefore you must there lay on Sea-Green, and mix it with Iris-Green to shade with, making the Veins or Ribs of that Side lighter than the Ground, and those of the right Side deeper.

The Prickles upon the Stalks and the Buds of the Roses, are made with slight touches of Carmine in all Directions, and those on the Stem of the Tree and larger Branches are struck in with Verditer and Carmine, and shaded with Carmine and Bistre, making also the bottom of the Stems and Stalks more reddish than the Tops, that is, you must mix Green with Carmine and Bistre to shade with.

S E C T. IV.

Of TULIPS.

As there are infinite sorts of Tulips, at least too many to be all traced out, I shall touch only on the finest, which are call'd striped or streaked. Their Stripes or Streaks are laid in with Carmine, very thin in some Places and very deep in others, and they are finish'd with fine Strokes of the same Colour, which must all observe the turn of the Stripes. For others, you begin with Vermillion, then proceed by mixing it with Carmine, and finish with Carmine only.

For others again, you lay Indian Lake upon Vermillion instead of Carmine.

Some also are coloured with Lake and Carmine mixed together, and Lake only, or with White to begin with.

Some of them are of a Violet or Purple Colour, and are to be done with Ultramarine, and Carmine or Lake, sometimes bluer and sometimes redder. The manner of ordering both is just the same, there is no difference but in the Colours.

You must in certain Places, as for Example, between the stripes of Vermillion, Carmine, or Lake, put sometimes a blue made of Ultramarine and White, and sometimes

times a transparent Purple, which must be finish'd with fine hair strokes like the rest, and scumbled into the Stripes. Some there are that have fallow Tints, which are made of Lake, Bistre, and Oaker, according as they happen to be ; these are only for fine and uncommon Tulips.

To shade the Ground of those whose Stripes are Carmine, take Indigo and White.

For those that have Lake Stripes, take black and white, therewith sometimes mixing Bistre, at other times green.

Some also you may shade with Gamboge and Umber, and always with fine hair strokes, that follow the turn of the Leaf.

Others also may be painted, which we call edged. This Tulip is all of one Colour, excepting the border, which is white with purple.

Red with Yellow.

Yellow with Red.

And Red with White.

The purple Tulip of this bordered sort, is laid in with Ultramarine, Carmine, and White, and you must with the same, shade and finish. The edge or border must not be touched, that is, you must only lay on a thin White, which must be shaded with a very thin Indigo.

The yellow is colour'd with Gamboge, and is shaded with the same Colour, Oaker, Umber or Bistre. The edging must be Vermillion, and finish'd with a very little Carmine.

The red is laid in with Vermillion, and finish'd with the same Colour, adding thereto Carmine or Lake. The border must be Gamboge, and to finish, add to it Gallstone, or Umber, or Bistre.

The white is to be shaded with black, blue, and white ; Indian Ink is very proper in this Case, for it shades soft, and is alone equal to the Effects of blue and white, mix'd with other black. The edging of this white Tulip must be Carmine.

For all these sorts of Tulips you must, in the middle of the Leaves, express a Nervure, which must be much brighter than the rest ; and you must scumble the edges into the Grounds, by fine strokes, for they must not seem cut or separated like the stripes.

Others there are of still different Colours. When you meet with any which are as it were black with inside, you colour and finish them with Indigo, as well as the Seed. If the Ground be yellow take Gamboge, and finish by adding thereto Umber, or Bistre.

The Leaves and Stalks of Tulips are commonly painted with a Sea Green, and shaded and finish'd with Iris-Green, with broad strokes along the Leaves. Some also may be made with Verditer mix'd with Masticoat ; and these may be shaded with Bladder Green, that they may be of a more yellowish Cast.

S E C T. V. *Of ANEMONIES.*

There are many sorts of this Flower as well double as single, which last are commonly plain, and are either Purple, with Purple and White, shaded with the same Colour, some bluer, some redder, sometimes very pale, and sometimes very deep.

Others are coloured with Lake and White, and finish'd with the same, diminishing the White, or even using none at all.

Others again are coloured with Vermillion, and shaded with the same Colour, deepen'd with Carmine.

Others once more, are White, and Lemmon-colour. These last are done with Masticoat, and both the one and the other must be shaded and finish'd, sometimes with Vermillion, and sometimes with a very deep Lake, and especially at the bottom of the Cup about the Seed, which is also often of a blackish Colour, and is imitated with Indigo, or with black and blue, mingling in some a little Bistre, and working continually with fine strokes, and scumbling the shades into the lights.

There

There are some that have the bottom of the Cup much brighter than the rest, and even so as to be quite white, altho' the rest of the Anemony be deep.

The Seed of all these Anemonies is imitated with Indigo and Black, with a very little White. Shade with Indigo alone; sometimes it must be heighten'd with Masticcoat.

Double Anemonies are of very various Colours, but the finest of them have their largest Leaves strip'd. Some of these Stripes are perform'd with Vermillion, to which is added Carmine to finish them, shading the rest of the Leaves with Indigo. For the smaller Leaves within, lay on a Mixture of Vermillion and White, and shade them with Vermillion mixed with Carmine; and here and there be very strong, particularly in the Heart or Cabbage, near the great Leaves on the shady Side, and finish with hair Strokes of Carmine, which must humour the Stripes and the turn of the Leaves.

The Stripes of others are coloured and finished with Carmine only, as well as the inner or smaller Leaves; observing, however, to leave, in the midst of these last, a little round, where you must lay in a deep Purple or Violet, which must be scumbled into the rest; and the whole being finished, lay on broad Strokes of this same Colour around the smaller Leaves, especially on the dark Side, and scumble them into the greater, which must, for the rest, be shaded with Indigo, or Black.

In some others the smaller Leaves are of Lake or Purple, altho' the Stripes of the greater be Carmine.

There are others whose Stripes are Carmine in the middle of most of the largest Leaves, with Vermillion under it in some Places, all which must be scumbled into the Shades of the Ground, which are of Indigo and White. The smaller Leaves are laid in with Masticcoat, and are shaded with a very deep Carmine on the dark side, and a very bright Carmine on the light side, leaving here the Masticcoat almost to itself, and only dividing the Leaves with fine touches of Orpiment and Carmine, which smaller Leaves may be sometimes shaded with a little very pale Green.

There

There are double Anemonies all Red, and of a Violet Colour; the first are coloured with Vermillion and Carmine, with hardly any White, and are shaded with Carmine alone, well gumm'd, that they may be very deep.

Purple Anemonies are imitated with Purple and White, and are finished without White.

In short, there are of all Colours of these double Anemonies as well as of the single, which are to be painted by the Rules here suggested.

The Green of both the one and the other must be Verditer mixed with Masticoat for the dead colouring, and it must be finish'd with Bladder Green. Their Stalks incline to be a little reddish; therefore they are shaded with Carmine mixed with Bistre, and sometimes with Green, after they are laid in with Masticoat.

S E C T. VI.

Of PINKS and CARNATIONS.

It is the same with Pinks and Carnations as with Anemonies and Tulips, for some of them are variegated or mixed with several Colours, and some are of one Colour alone.

The first are sometimes streak'd, strip'd or mark'd, sometimes with Vermillion and Carmine, and sometimes with Lake and Carmine, at other times with pure Lake, or with White. Some are deep, others are pale. Sometimes they are variegated with small or narrow Strokes, sometimes with broad or great.

Their Grounds are commonly shaded with Indigo and White.

There are some of these Flowers of a very pale Flesh Colour, and variegated with another deeper, made of Vermillion and Lake.

Others are of Lake and White, which are shaded and variegated without White.

Others again are all Red with Vermillion and Carmine, as deep as possible.

Others, once more, are all Lake.

In

In short, others there are of great Variety, which Nature herself, or your own Fancy, can best guide you to.

The Green of all of them if of the Sea Hue, which shade with Iris-Green.

S E C T. VII.

Of the MANY-FLOWER'D LILY.

Let your first Colour be Mine de Plomb, the Vermilion, and in the strongest of the Shades Carmine; and finish with the same in strokes which correspond with the turn of Leaf. Heighten the Lights with Mine de Plomb and White, and imitate the Seed with Vermillion and Carmine.

The Greens must be Verditer, shaded with Iris-Green.

S E C T. V III.

Of the DAY-LILY.

There are three Sorts of this Flower :

Gridelin, a little Reddish,

Gridelin, very pale,

And White.

For the first lay on Lake and White, and shade and finish with a deeper Mixture of the same, adding thereto a little Black to sadden it, especially for the deepest Places. For the second lay on White, mix'd with a very little Lake and Vermillion, so that these two last do hardly appear; then shade with Black and a little Lake, observing to be redder in the Heart of the Leaves next to the Stalk, which, as well as the Seed, must be of the same Colour, particularly towards the Top, and lower a little greener.

The Stalk of the Seed must be Masticcoat, shaded with Bladder-green.

The other Flowers of this sort are laid on with White only, and are shaded and finished with Black and White.

The

The Stalk of these last, and the Green of them all, must be of the Sea sort, shaded with Iris-Green.

S E C T. IX.

Of HYACINTHS.

They are of four sorts :

A deepish Blue,

A paler Blue,

Gridelin,

And White,

The first must be Ultramarine and White, shaded and finished with less white.

The second must be of a paler blue.

The third must be Lake and White, and a very little Ultramarine, and must be finish'd with the same Colour, but of a deeper Degree.

In short, the fourth must be all White, and then shaded with Black and a little White ; finish with strokes of the same turn with the Out line of the Leaf.

The Green and Stalk of the blue Kind, must be of the Sea sort, shaded with a deep Iris ; and in the Stalk of the first you use a little Carmine, to give it a reddish Cast.

The Stalks of the two others, and their Greens, must be coloured with Verditer and Masticoat, shaded with Bladder-Green.

S E C T. X.

Of the P I O N Y.

Let your first Lay in general be of Indian Lake and White, of a pretty good Body ; and then shade with a lesser Quantity of white, which you must quite disuse in the deepest Places ; this done, finish with strokes of the same Colour in the manner we have so often intimated, charging it strongly with Gum in the darkest shades, and heightening the lights and edges of the brightest Leaves, with White and a little Lake : You must also express small Veins just like the strokes of hatching, but they must appear more.

The

The Green of this Flower must be of the Sea kind, and shaded with the Iris.

S E C T. XI, Of COWSLIPS.

They are of four or five Colours :

Of a very pale Purple,

Of Gridelin,

Of White and Yellow.

The Purple must be laid on with Ultramarine, Carmine and White, observing to diminish the Quantity of this last when you are shading.

The Gridelin-coloured must be painted with a light Lake, a very little Ultramarine, and a great deal of White. Shade with the same, but let it be darker.

For the white Sort, let it be white alone, and shade with black and white Strokes.

The Eye of these three Cowslips, must be done with Masticcoat, in form of a Star, which is shaded with Gamboge, and must, in the midst of it, have a small Round of Bladder green.

The yellow Cowslip, must be Masticcoat, shaded with Gamboge and Umber.

The Buds, and Leaves, the Stems, must be Verditer mixed with a little Masticcoat, and finished with Iris-green, with this same Colour expressing Ribs or Veins on the Leaves, and heightening the Lights of the largest with Masticcoat.

S E C T. XII.

Of the RENUNCULUS.

There are many sorts of this Flower, the finest of which are Reddish and Orange-colour'd. For the first, use Vermillion, with a very small Quantity of Gamboge; add Carmine to shade with, and finish with this last Colour, and a little Gall stone.

For others, use Indian Lake instead of Carmine, but especially at the Heart.

The Orange coloured, may be imitated with Gamboge, finished with Gall-stone, Vermillion, and a little Carmine, leaving some yellow Stripes and Spots.

The Green of the Stalks, is Verditer and Masticoat very pale, to which must be added Iris-green to shade with.

The Leaves must be of a deeper Green.

S E C T. XIII.

Of the C R O C U S.

It is of two Colours :

The Yellow,

And the Purple.

The Yellow is done with Masticoat and Gall-stone, shaded with Gamboge and Gall-stone ; expressing on the Outside of each Leaf, three Lines or Rays, separate from and parallel to each other, with Bistre and pure Lake, which must be scumbled into the Strokes of the Ground or Leaf. The inside of the Leaves must be all Yellow.

For the Purple, lay on Carmine, mixed with a little Ultramarine and White ; expressing deep Purple Stripes on some of the Leaves, as you did for the Yellow ; and on others only fine Veins. The Seed of all is Yellow, and must be done with Orpiment and Gall stone ; and for the Stalk, lay on White, and shade with Black, mixed with a little Green.

The Green of this Flower is a pale Verditer, shaded with Bladder green.

S E C T. XIV.

Of the I R I S.

The Persian or Indian Iris is done by covering the innermost Leaves with White, and shading them with Indigo and Green mixed together, and leaving a small White separation in the middle of each Leaf. On the outermost Leaves, you, in the same Part, put on a lay of Masticoat, which must be shaded with Gall-stone and

H

Orpiment,

Orpiment, making small deep and longish Dots or Spots, at some small Distance from each other, upon the upper Side of all the Leaf ; and at the End of each Leaf make large Spots of Bistre and Lake for some, and of Indigo alone for others, but very deep. The rest, and the outside of the Leaves must be shaded with Black.

The Green must be of the Sea sort and Masticoat, very pale, and shaded with Bladder green.

Another sort of Iris is laid on with Purple and White, mixed up with a little more Carmine than Ultramarine, and for the shades, but especially for the middle Leaves, be mindful to diminish the Quantity of White, and on the contrary to what has been said, let the Ultramarine prevail over the Carmine, expressing Veins with this same Colour, and leaving in the middle of the Leaves within-side a small yellow Nervure.

Others there are that have this same Nervure on the first Leaves, whose end only is bluer than the rest.

Others again are shaded and finished with a redder Purple, and have also a Nervure in the middle of the Leaves without ; but it is white and shaded with Indigo.

Some of them are Yellow, and are done with a lay of Orpiment and Masticoat, shaded with Gall stone, with Veins of Bistre on the Upper side of the Leaf.

The Greens of them all, must be of the Sea-colour, which must be mixed with a little Masticoat for the Stems and Stalks, and shaded with Bladder-green.

S E C T. XV.

Of J E S S E M I N.

Is done with a lay of White ; shaded with black and white. For the outside of the Leaves add a little Bistre, giving the half of each, on that side, a faint reddish Cast with Carmine,

S E C T. XVI.

Of the TUBEROSE.

Lay on white, and shade with black, and a little Bistre in some Places ; and for the outside of the Leaves, mix a little Carmine to give them a reddish Tint ; particularly towards the Ends.

The Seed must be Masticcoat ; shaded with Bladder-Green.

The Green of the Leaves and Stalks must Verditer ; shaded with Iris-green.

S E C T. XVII.

Of HELLEBORE.

The Flower of Hellebore is done by almost the same Rules we have given for the Tuberoze ; that is, it is laid on with White, and shaded with Black and Bistre, making the outside of the Leaves a little reddish here and there.

The Seed must be a deep Green heightened with Masticcoat.

Its Green is sad, and is imitated with be Verditer, Masticcoat, and Bistre ; finished with Iris-green and Bistre.

S E C T. XVIII.

Of the LILY.

Be covered with White, and shade with black and white,

The Seed ; Orpiment and Gall stone.

The Green ; like that of the Tuberoze.

S E C T. XIX.

Of the SNOW-DROP,

Cover and finish as for the Lily.

Let the Seed be Masticcoat, shaded with Gall stone.

Let the Green be Verditer and Iris.

S E C T. XX.

Of the JUNQUIL.

Lay on Masticoat, and Gall-stone; finish with Gamboge, and Gall-stone.

The Leaves and Stalks; Sea-green, shaded with Iris-green.

S E C T. XXI.

The NARCISUS.

For all of this Flower, of the Yellow sort, whether double or single, let your first lay be Masticoat, then Gamboge; and finish by adding thereto Umber, or Bistre, excepting however, the Cup or Bell in the middle, which must be done with Orpiment and Gall-stone, and edged with Vermillion and Carmine.

For the White sort, be covered with White, and shade with Black and White; excepting the Cup aforesaid, which must be done with Masticoat and Gamboge.

The Green; Sea, shaded with Iris.

S E C T. XXII.

The MARIGOLD.

Let your first lay be Masticoat, the second, Gamboge, and shade with this last, mingled with some Vermillion. To finish, add Gall stone and a little Carmine.

The Green; Verditer, shaded with Iris.

S E C T. XXIII.

The FRENCH MARIGOLD.

Lay on, first, Masticoat; secondly, Gamboge; then proceed with Gall stone mixed with this last; finish with this last Colour, adding thereto Bistre, and a very little Carmine for the deepest shades.

S E C T. XXIV

The AFRICAN MARIGOLD.

Lay on Gamboge; shade with the same, mixing there-
with

with a good deal of Carmine, and a little Gall-stone ; but about the Leaves make an Edging of Gamboge, very bright in the lights, and darker in the shades.

The Seed is shaded with Bistre.

The Green of both these last, must be Verditer, shaded with Iris.

S E C T. XXV.

The S U N F L O W E R.

Be covered with Masticoat and Gamboge, and finish with Gall stone and Bistre.

The green must be laid on with Verditer and Masticoat ; and shaded with Bladder-green.

S E C T. XXVI.

The P A S S R O S E.

Like the French Marigold, and the Green of the Leaves the same ; but their Veins must be of a deeper Green.

S E C T. XXVII.

The S C A B I O U S.

There are two sorts of the Scabious, Red and Purple. The Leaves of the first are Indian lake with a little White, and in the middle, where there is a large Pod or Bud which holds the seed, it is to be coloured and finished with Lake only, but with the Addition of a little Ultramarine or Indigo to make it darker. Then make little longish spots of White for the upper Part, at a pretty good Distance from each other ; but forget not to let them be stronger in the lights and weaker in the shades, and to make them true in all Directions.

For the others, be covered with a very pale Purple ; as well on the Leaves, as on the Receptacle or Pod in the middle ; shading both with the same Colour of a deeper Dye ; and instead of using small white strokes for the seed, let them be Purple, and make a Round about each, and that, all over the Pod.

The

The Green ; Verditer and Masticoat, shaded with Iris Green.

S E C T. XXVIII.

The GLADIOLA.

Lay on Columbin Lake, and White, very pale ; then proceed and finish with Lake only, very bright in some Places, and very deep in others, ever adding thereto Bistre for the strongest shades.

The Green ; Verditer, shaded with Iris.

S E C T. XXIX.

The LIVER-WORT.

It is sometimes Red, and sometimes blue ; for this last be covered all over with Ultramarine, White, and a little Carmine, or Lake ; shade the inside of the Leaves with this Mixture, but let it be deeper, except for the outermost ; for which and the outside of all, you must make an Addition of Indigo and White, that the Colour may be deadned.

For the Red ; lay on Columbin Lake, and White, very pale ; and finish with less White.

The Green ; Verditer, Masticoat, and a little Bistre. Shade with Iris, and a little Bistre, but chiefly for the outside of the Leaves.

S E C T. XXX.

The POME-GRANATE BLOSSOM.

For this, lay on Mine de Plomb, shade with Vermilion and Carmine, and finish with this last.

The Green ; Verditer and Masticoat, shade with Iris.

S E C T. XXXI.

The Blossom of the INDIAN BEAN.

Lay on Indian Lake and White, shade the middle Leaves with Lake only ; but thereto add a little Ultramarine for the rest.

The Green, Verditer ; shade with Iris.

S E C T.

S E C T. XXXII.

The LARK'S-SPUR, or HEEL.

It is of several Colours, and striped. The most common are Purple, Gridelin, and Red.

S E C T. XXXIII.

VIOLETS and PAUNSIES or PANSIES.

The same may be said of these, except that for these last, the two middle Leaves are bluer than the rest, that is, towards the border, for the Inside of these is yellow, with little black Strokes or Veins, which dye away towards the middle.

S E C T. XXXIV.

The IMPERIAL LILY.

It is of two Colours, viz. Yellow, and Red, or Orange-Colour. For the first be coloured with Orpiment, and shade with Gall stone and a little Vermillion.

For the second be covered with Orpiment and Vermillion, and shade with Gall stone and Vermillion, making the Beginning of the Leaves, next to the Stalk, of Lake and Bistre, very deep, and for all, Veins of this Mixture along the Leaves.

The Green, Verditer and Masticcoat, shaded with Iris and Gamboge.

S E C T. XXXV.

The GILLY-FLOWER.

There are many sorts of Gilly-flowers, as White, Yellow, Purple, and strip'd, streak'd, or variegated with several Colours.

For the White; be covered with White, and shade with Black, and a little Indigo for the Heart of the Leaves.



XXII.

or *H E E L*.

ipped. The most com-
ed.

XXIII.

E S or *P A N S I E S*.

except that for these
bluer than the rest, that
side of these is yellow,
which dye away to-

XXIV.

L L I L Y.

ow, and Red, or Orange-
ed with Orpiment, and
Vermillion.

Orpiment and Vermil-
and Vermillion, making
to the Stalk, of Lake
all, Veins of this Mix-

assicoat, shaded with Iris

XXXV.

L O W E R.

Gilly flowers, as White,
streak'd, or variegated

with White, and shade
go for the Heart of the

For

For the Yellow ; Masticcoat, Gamboge, and Gaffstone.

The Purple is done with Purple and White. You must finish with less White, minding to be brighter in the Heart, and even a little yellowish.

For the Red ; Lake and White, and finish without white.

For the striped or variegated, lay on white, and variegate sometimes with a Purple, wherein Ultramarine predominates ; or sometimes with a Purple wherein Carmine prevails, or Lake ; sometimes with white, at other times without it, shading the rest of the Leaves with Indigo.

The Seed of every one must be Verditer and Masticcoat finished with Iris.

The Leaves and the Stalks, with the same Green, mixed with Iris, to shade with.

I should never have done, were I here to dwell on all the Flowers that may be painted ; but I have said enough, and even too much, to instruct you fully in this branch of Painting ; for ten or a dozen Examples had been sufficient for any one who should begin to copy Nature herself ; for in this Case he has nothing to do but to imitate what he has before his Eyes. But I imagin'd it is more useful to copy after Prints ; and that I should undertake no ungrateful Task, did I dwell on the method of colouring and finishing a good Number of Flowers, at least (to conclude as I began) every one may take or leave what he sees proper.

S E C T. XXXVI.

I shall not here subjoin any particular Instructions on an infinite Number of other Subjects ; for it were to little or no purpose, and this little Work is already more diffuse than I at first intended it. Therefore I only add in general, that Fruits, Fishes, Serpents, and all sorts of Reptiles, must be touched after the manner of Figures, that is, hatched or stippled : But that Birds and all the other Animals must be finished with strokes after the manner of Flowers.

S E C T.

S E C T. XXXVII.

Take heed to use no White Lead for any of these things, for it is good for nothing but Oil, turning as black as Ink when tempered with Gum-water only, and especially if you put up your Work in a damp place, or where Perfumes are. Instead thereof use Ceruse of Venice, or Flake White, which is to the full as fine; fear not to use this, especially for your first Colourings, but mix a Portion of it in all your compounds to give them a certain Body which strengthens your Work, and makes it appear warm and mellow.

Painters, however, practise differently upon this Head; for some use but little of it, and others none at all; but the manner of these last is hard and dry. Others again use it in abundance, and these are certainly to be followed, as conforming to the most usual Opinion of the most skilful Artists; for besides that it is the most ready, you may thereby (a thing almost impossible to be done without it) copy all sorts of Pictures, notwithstanding the contrary Opinion of those, who pretend that in Miniature you cannot come up to the Strength and the different Tints of Pieces in Oil; a mistake, at least with reference to good Painters, as is sufficiently evinced from the Effects; for we see Figures, Landscapes, Portraits, and every thing else in Miniature, touched in the grand manner with as much Truth, and as nobly, altho' more prettily and delicately than in Oil.

I know indeed this kind of Painting has its Advantages, were they only that it dispatches more in less time, that it is more easily preserved, and that it claims to be the eldest Sister, and boasts its Antiquity.

But notwithstanding all this, it must be granted that Miniature has her Advantages also, and, without repeating what I have already said, it is more neat and convenient; you may carry all your Apparatus in your Pocket; you may work where you please without so much Preparation; you may leave it and resume it just when and as often as you please, which cannot well be practised with the first, in which you ought hardly ever to work dry.

But give me leave to say, that it is in both the one and the other as in Comedy ; in which the greatest or the least Perfection of the Actors consists not in acting the higher or lower Parts, but in acting, what they do act, extremely well ; for if he who acts the meanest Character acquits himself better therein than he who acts the Heroe of the Play, he will doubtless deserve a greater measure of Applause.

And the same is it in the Art of Painting ; for its Excellence is not confined to the Grandeur of one particular Subject, but to the manner of treating it : Have you a Talent for this, plunge not yourself rashly into that ; and if you have from Heaven received some Spark of the Divine Fire, know for what End it was bestowed on you, nor deviate from the Path cut out for you. Some shall take the different Airs of Heads, others shall succeed better in Landscapes ; some shall work finely in small, who could do little or nothing in great ; and others are good Colourists, but bad Designers ; and others, in short, have a Hand for nothing but Flowers. To conclude, the *Bassans* have rais'd to themselves a Name for Animals, which they most excellently touched, and much better than any thing else.

Let every one therefore be contented with his Genius, nor presume upon another's Ground, or attempt a Flight unequal to his Strength ; it being in vain to strive against Nature, and imprudent and immodest in us to aim at what does not belong to us, for we thereby uncover our own shame, and work our own disgrace. On the other Hand, it is no dishonour to you that you are not possess'd of all the great Talents which have ennobled all the great Painters, each of whom has had his Blemishes as well as Beauties ; let us therefore, I again repeat it, sit down quietly with the share allotted to us, the great matter is to cultivate it with Care and Diligence.

And altho' this small Tract may contribute to your Assistance, as it assuredly will, I present it to you as no other than a Supplement to more immediate Helps : Doubtless you will learn more effectually under the Direction of an able Master, from whom you may imbibe all the sound Precepts and true Rules, and see all made plain

plain to you by Practice. Now, altho' the Contrivances for Drawing, which in the beginning I gave you, be infallible; it were much better to have a Hand expert thereat without any such servile Helps; for if you are not actuated by a superior Genius to guide you, and if you have not a most accurate Eye, in vain will be all your Pains to adjust your pieces correctly, and it will be a mere Chance if after all they are not lame and spiritless; for in laying on the Colours, you easily lose the Strokes, and with far more Difficulty will you be able to re trace them, if you are quite awkward at Drawing. I do therefore most earnestly recommend it to all Lovers of Painting, that they apply themselves to draw learnedly, to copy with indefatigable Perseverance, and that this they always do most tenaciously from good Originals: In a Word, be satisfy'd to ascend regularly by those Steps which lead up to the Perfection of this fine Art, whose Precepts, as happens in all other Arts, are soon obtained; but this is not enough, you must execute also. Theory is of little worth without Practice, as Practice without Theory is a blind Guide, who leads us astray instead of conducting us in the right Road: But to know well what you would do, and to do well what you know, is the true Means of attaining your End, greatly to increase in Knowledge with Time, and to become the good Scholar of an excellent Master.

For my part, I boast not of being such; but however, I will venture to promise all those who shall be pleased to step into this my little School, with never so little a disposition and longing to learn, That they will have no Cause to repent themselves in their Trouble; for if they stay with Pleasure, I flatter my self they will not go out as they came in.



T H E

Secret of an *Italian*

F O R M A K I N G

*Carmin*e and *Ultramarine*.

AN anonymous Painter, one who appears to have been a sound and excellent Judge, expresses himself to this Effect concerning this Arcanum, " Nothing is more safe or easier than this manner of making these Colours; they have a Lustre, a Vivacity not to be expressed, they never change, and may be prepared at so easy a Rate, that for one Pistole you may make as much as would cost you seven or eight at *Florence*; but the Proof will confirm what I here advance, much more effectually than all I can say."

*Carmin*e.

Take a pound of Brasil-wood from *Fernambuco*, of the Golden-colour, and pounding it in a Mortar, steep it for three or four Days in a Bocal of White-Wine Vinegar; then boil it for half an Hour, and passing it through a close Cloth, put it again over the Fire. In the mean time have another Vessel or Pot at hand, in which shall be eight Ounces of Alom diluted in White-Wine Vinegar, which Dilution pour into the other Liquor, and stir it about with a Spatula: The Froth or Scum which will hereupon arise, will be your *Carmin*e, collect it therefore and dry it. This may be done with *Cochineal* instead of *Brazil* wood,

Ultramarine.

Ultramarine.

Take ten Ounces of Linseed Oil, and pour them into an Earthen-dish, with seven or eight Drops of common Water, and set it upon the Fire, where let it remain till it begins to fry or boil, and then throw in a pound of white Virgin-wax, broken into small Bits. When the Wax is melted, throw in a pound of Greek Pitch, and add thereto four Ounces of powder of Mastick, which has been previously melted by it self, together with two Ounces of Turpentine, and let the whole melt over the Fire for an Hour together. The Hour expired, pour this Composition into cold Water, and if it prove soft like Butter it is enough ; but if you feel any hard Grains or Grit, conclude that your Mastick is not sufficiently melted, and clap it over the Fire again.

The whole being in due temper, put blue Lapis into a Crucible, and let it remain in the Fire till it be red hot like the Fire itself, and then throw it into White-Wine Vinegar, which it will absorb till it burst and break into small Bits, which bray to a Powder, and then incorporate this powder with a little of the above Composition, but let it be as little as possible, and let it remain thus for about a Fortnight. After this lay a Board, a little inclined, upon the Edge of a Table, (it would be the more convenient if this Board had a Trench or Channel cut along it ;) and under the Foot of this Board place a Glass Vessel or Receiver, and put your blue Paste at the Head of it, and above the same, place a Vessel of Water, so that it may distil drop by drop upon the Paste. All things being disposed in this manner, help the Water to dilute the Paste by stirring it very gently with the small End of a smooth Stick. The first Blue which will come away drop by drop, will prove the finest ; and when you perceive it to lose of its Beauty, change the Recipient for another, to receive the second Blue, after which you will have a third, which you may use very safely. Set these three sorts of Ultramarine to dry, then collect them, and put them up separately in Bags of White Leather.

O T H E R



OTHER
SECRETS
FOR

Making Ultramarine after different Ways; Fine Lakes, and Colombine Lakes; Greens, and other Colours, after different Ways; particularly adapted to Miniature.



ULTRAMARINE.

TAKE half a Pound of Lapis Lazuli, and lay it upon burning Coals, where let it remain till it be red hot, and then quench it in very strong Vinegar. Afterwards, grind it upon some hard Marble or Stone, with rectified Brandy; the more you grind it the finer will be your Ultramarine; and being ground to your mind, leave it upon the Marble, or put it into some Vessel, while you prepare your Paste, or Pastel, wherewith to incorporate your said Lapis.

To make this paste, take a quarter of a pound of yellow Wax, a quarter of a pound of Turpentine, as much Rosin, and as much Linseed-oil; melt them all together over a slow Fire, and when they begin to bubble, they will be sufficiently done. Pour this melted Composition into glazed Pans, and it will be your Ultramarine, Pastel or Paste, of which take a Quantity, equal to that of your
your

your Lapis, and knead them together upon your Marble, that is, your Lapis and Pastel together, which being incorporated, leave them in that State for a Night. To force out the Ultramarine in the said Pastel, pour fair Water upon it, and knead it with your Hands, like so much Dough, and the Ultramarine will squeeze out and fall into a Pot, which must stand under your Hands to receive it ; leave it then to settle in the said Water, till you perceive the Ultramarine to be subsided.

Another Way.

Take four Ounces of Linseed Oil, four Ounces of new Wax, four Ounces of Arganton, one Ounce of Rosin, one Ounce of Mastic in Tears, four Ounces of Burgundy-pitch, two Drams of Incense or Frankincense, and two Drams of Dragon's Blood ; bruise each Ingredient, by it self in a Mortar ; then put your Linseed-Oil in a pan over the Fire, and when it begins to fry, throw in your Ingredients one after the other, so that your Dragon's Blood be the last thrown in ; in the mean time, continually stirring the others with a Stick or Spatula, and when the whole becomes glutinous and stringy between your Fingers, your paste is fit for Use. Then throw in your Lapis Lazuli, having previously burnt it in a Coal-fire, quenched it in White Wine-Vinegar, ground it when dry upon a Marble, and pass'd it through a very fine Sieve, as has been before specified ; your Lapis thus prepared, and then incorporated with your paste, leave it in that State for twenty-four Hours, and then force out your Ultramarine with Spring Water, but use no other, and knead well your paste with this said Water ; you will then have the first Tincture or Degree of your Blue, which will be the finest and most lively of all ; continue this to the third Repetition ; and if after all, you throw the Remains into a proper chemical Vessel, you may have the Gold with which your Lapis was impregnated.

Some there are who knead their paste, at once, in a Vessel of milk warm Water, into which they squeeze their Ultramarine, which they leave to settle for twenty-four Hours and more, when pouring off the Water by Inclination,

Inclination, they find the Ultramarine at bottom,³ and set it to dry in the Sun. Sometimes they leave the Lapis incorporated in the paste for the space of a Month, before they express or squeeze out the Ultramarine, and in the said paste, instead of Linseed Oil and Turpentine, substitute only Oil of Turpentine, and black Pitch instead of Burgundy-pitch; as for the Lapis itself, they heat it, quench it, grind it, and searce it, in the manner we have directed above.

Fine Lake.

Take a pound of good Brazil, which boil with three Quarts of Lye, made of the Ashes of Vine-sprigs, till it be half evaporated, then let it settle and strain it off. Boil it over again with fresh Brasil, Cochineal, and Terra-merita; that is, only half a pound of Brasil, and half a quarter of a pound of Cochineal, with the further Addition of another Quart of fair Water, which must boil till it be also half evaporated as before, then left to settle, and then strained. as for the Terra-merita, you need have but an Ounce of that. When you take this Liquid from the Fire, observe to throw into it an Ounce of burnt Alom, reduc'd to an impalpable powder, and dissolve the same therein by stirring it with a Stick, and adding thereto half a Dram of Arsenic. Then to give it a Body take two Cuttle-fish Bones, pulverize them and throw them in; leave it to dry up at leisure, and then grind it with a good Quantity of fair Water, in which leave it to steep; then strain it thro' a Cloth, and make it up into small Tablets or Cakes, which set to dry on a Card or Pasteboard. If you would have your Lake redder, add to it Lemon Juice; and if you would have it deeper, add to it Oil of Tartar.

Another Lake.

Take Shavings or Shearings of Scarlet, and boil them in a Lye of the Ashes of burnt Tartar or Oil of Tartar, which Lye has the property of separating the Scarlet; when it has boiled sufficiently take it off, and add to it Cochineal, Mastick in powder, and a little Roch Alom; boil the whole over again, and while it is hot, strain
it

It two or three times through a Jelly-Bag, the first time squeezing the Bag from top to bottom with two sticks ; then take out what remains behind in the Bag and wash it well ; pass the Liquor you express'd with the sticks thro' the Bag again, and you will have a paste sticking to the sides of the Bag, which you may spread out upon a Paste-board, or divide into small Parcels upon paper, and leave it to dry.

Columbine-lake.

Take three Quarts of the most subtilly distill'd Vinegar, one pound of the finest Brasil-wood of *Fernambuco*, which rasp and set it to steep in the said Vinegar a Month at least, and if longer so much the better ; then boil the Whole in *Balneo Mariae*, three or four wabbles up, and leave it for a day or two ; after which prepare a quarter part of Alom-powder, which put into a very clean Earthen-pan, and upon it strain your Liquor thro' a Cloth, and so let it remain for a Day ; then heat the Whole till it simmers, and leaving it again for twenty-four hours, prepare two Cuttle-fish Bones into a powder, and thereupon pour your Liquor which must be a little warm ; stir then the whole with a stick till it is cool, and leave it again for twenty-four hours before you strain it : Observe that you must previously strain it upon the Alom before you pour it upon the Cuttle-fish Bone.

The Marc or Dregs of Columbine-lake.

To make a fine purple Colour, besides the Carmine for Oil and for Distemper, take the Dregs or Marc of the Columbine lake which subsides with the Cuttle-fish Bone, and dry it and grind it ; there is no fine Lake so splendid, and if you mix it with Lake you add to its body.

Iris Green.

Take of the bluest Flower-de-luces, otherwise called Flag-Iris ; strip off the upper or fatten part of them, and keep only that ; the rest is good for naught, and throw away even all the little yellow Nervures, pound them in a Mortar what you thus pick, and being well pounded, throw upon it a little Water, three or four Spoonfuls,
more

more or less, according to your quantity of Flowers : Previous to this you must have dissolved in this Water a little Alom and Gum-Arabic, but a very little, and then bray them well all together, and strain the whole thro' a close Cloth, and put this Juice into Shells which dry in the Air.

Another Way.

After you have pick'd the above-mentioned Flowers, pound them, and put to them a little Alom-water, as above directed ; throw in a little powder of quick Lime, as if you was salting a Sallad ; it has the property of changing the Colour and cleansing it : In fine, express the Juice into Shells.

Another Way.

Pound the same Flowers in a Mortar, express the Juice into Shells, and salt the Juice in each Shell with Alom a little unequally; that you may thence have Greens of different shades.

Another Way Still better.

Pound Alom, and bruise French or Avignon Berries, mix them together with Water, and boil them either over a Fire or an Ash-heat till the Water become very Yellow; then pound Flower-de-luces or the Flag-Iris in a Mortar, and pour thereto a little of this yellow Water, in proportion as you would have it a bright Green or a sad Green ; then strain it thro' a Cloth of Goats Hair, for it would be the worse for passing thro' Linen, and put the Juice so strained or express'd into large Shells, which expose to all the Heat of the Sun, for the Green will become mouldy or mothery in the shade, and prove too clammy.

Another Way.

Take Leaves of the Flag-Iris, mince them very small, and put them into some Glass or Earthen Vessel, or what would do better, in some Copper pot or pan with powdered Alom and quick Lime ; leave them to putrify in this state for ten or twelve Days ; being rotten squeeze them into Shells. The Green is more lively and rich when you only bray the Leaves, and express them at
once

once without giving them time to rot, having previously salted them over with powdered Alom.

Another Way with the Flower of Violes.

The Green made of the Leaf of the *March Violet* is done by the same Method, but you must have a greater Quantity of it, and this is a deeper Green than that of the *Iris*. Observe that instead of Lime you may use *French Berries* bruised with Alom. It exceeds Lime for changing Blue into Green.

You may also make a Green with the Flowers of *Pan-fies*, after the same manner.

Bladder-Green.

Take the Fruit or Berry of the Plant or Bramble call'd *Rhamnus*, pound it in a Morter, and throw into it a little powdered Alom; then express the Juice of it, and put it up in a Bladder, which tye close and leave it to dry till your Green is hard.

French Pink.

It is commonly made with the White of *Troye*, otherwile call *Spanish White*, and *French* or *Avignon Berries*, but it is apt to change Colour; so that it will be safer to make it of white Lead or Ceruse, which grind very fine and dilute it upon a Marble, whence take it up with a wooden Spatula, and leave it to dry in the shady part of any Room; then take *French Berries*, bruise them in a Marble Mortar with a wooden Pestle, and boil them with Water in a leaded Earthen-pot, till a third or more be evaporated; strain this Decoction thro' a Linnen-cloth, and put into it the bigness of two or three small Nuts of Alom to hinder it from changing colour; when it is dissolved, dilute the White with this Decoction to the Consistence of a pretty thick pap, or rather paste, which work well between your Hands and make up into Trochisks, which set to dry in an airy Room; when it is dry dilute it again two or three times with the said Decoction according as you would have your Pink bright or deep, and leave it to dry each time till it be very dry. Observe that your Liquor or Decoction must be warm when you dilute your paste therewith, and that you must make it
afresh

afresh when the first is tainted, taking heed never to touch it with Iron or Steel, but all along use a wooden Spatula.

How to make a right Use of Alom.

The best way of using Alom for Iris-Green, and the other Compositions of colours, which would change without this Mineral, is to break it small and to put it into a little Water over a Fire, for otherwise it would never dissolve; and with this Water sprinkle over your Flowers on the Juice of your colours; but the less Alom the better, for it burns when it is used too freely.

How to purify Vermillion.

Cinnabar or Vermillion being a compound of Mercury and Sulphur, must be divested of the Impurities it contracts from those Minerals, which Impurities darken its Lustre, and cause it to change. Now this purification is thus ordered.

Grind the Cinnabar, in Stone, with fair Water upon a Marble or Porphyry; put it into a Glass or earthen Vessel to dry, then put Urine to it and mix it, so that it be thoroughly wet and swim; Let it settle then, and the Cinnabar being precipitated or fallen, pour off the Urine by Inclination, and put fresh in the Room of it, leaving it so all Night, and repeating the same Change for four or five days till the Cinnabar be thoroughly purified. Continue your Process with beating up the White of an Egg, which mixing with fair Water, pour it upon your Cinnabar, and stir the whole about with a Walnut tree-stick; change this Liquor two or three Times as above, and keep the Vessel well stopped up or closely covered for fear of dust, which would spoil your Cinnabar; and when you would use it, temper it with Gum-water; with this it will not change its colour.

Another Way.

Grind Cinnabar, previously pulverized, upon a Porphyry with the Urine of a child, or with Brandy, and dry it in the shade.

If you would entirely divest it of all its Obscurity, and give it a brighter or redder countenance, infuse in the Brandy either Urine or a little Saffron, and with this Liquor grind your Cinnabar.



A MEMORANDUM,

For making a very fine polish'd Gold.

The Pieces of Wood you would gild, whether Frames, Borders, or ought else, must be very smooth; and to make them the more so, pass Sea-dog's-skin over them. Then you must glue or size it with a stuff made of the cuttings of white Gloves, and lay on nine or ten layers of White when it is thoroughly dry. When it is perfectly dry use your Shave Grasp that it may be so much the kinder, and then warm some Size and Water, into which dip a fine piece of Linnen, which wring, and with it rub the White. Then lay on two or three layers of Gold-colour, and more if it be not of a good Body or deep enough; and when it is dry, rub it soundly with a dry Cloth till it be bright again. Then take of the strongest Brandy you can find, and wash the Gold-colour with this Brandy by the help of a pencil: but you must have your Leaf Gold cut and ready upon the Cushion to clap it on the Moment the pencil is gone over the part; and when it is dry, polish it with a Dog's Tooth.

To make Glove leather Size.

Take a pound of the cuttings of white Gloves, and let it steep in Water some time; then boil it in a Pot with twelve Quarts of Water, till it be reduced to two Quarts; then strain it thro' a Cloth into a new Earthen-pan. To know if your Size is strong enough, try when it is cooled, if it feels firm under your Hand.

To make the White.

The Size being done, take Crayon White, and scrape it with a Knife, or grind it upon a Marble ; melt and heat your Size to a violent degree ; then taking it from the Fire, throw in White enough to give it the consistence of a pap, leave it to infuse for a quarter of an Hour, then stir and mix it with a Hog's Hair Brush.

Take this White and add more Size to it, that it may be the thinner for the first and second goings over.

Observe that your first Lay be dry before you cover it with the second ; if it be Wood you are upon, it will require a twelve-fold Repetition, but for Pastboard six or seven will be enough.

This done, take Water, and into it dip a soft Brush and strain it between your Hands or Fingers, and rub your Work over with it, to make it lye more even ; as soon as your Brush is full of White, you must wash it over again, and even change your Water, when it is too white.

You may sometimes use a wet Cloath instead of a Brush.

Your Work being smooth and even, let it dry, and when it is dry, rub it over with shave Grass, or a piece of new Cloth, to make it the kinder.

How to lay on a Ground to Gild and Silver upon, after a different manner.

Take a Quarter of a pound of fine Bole Armoniac well chosen, fresh, and greasy to the Touch ; steep it in Water to make it dissolve, then grind it, adding thereto the Bigness of a Filberd of Crayon, and of a Pea of Tal-low, which prepare thus :

Melt them, then throw them into fresh Water, and therein work them with you Hands to fit them for Use ; the Size of a Peai's enough for one grinding.

In grinding you throw a little Soap-suds among the Bole. This compound being ground, put it into fair Water, which change from Time to Time to preserve it.

When you would use it, temper it with warm'd Size, and if it prove as strong as what you whitened with, put in a third of Water, and mix it with the Bole,
which

which you shall make of the Thickness of a Cream ; then lay it on your work with a pencil, and go over the whole with it three or four times, leaving it each time to dry before you go over it again ; being finished and dry, rub it with a soft Cloth, before you proceed to lay on your Gold or Silver.

When you use this Ground for Gold, you must add a little Red Lead to it.

How to lay on the Gold and Silver.

Set your piece slanting, and wet a part with a large pencil dipped in fair Water, then lay on the Gold, which must be ready cut upon a Leathern-cushion, whence you may take it up with Cotton. The whole being gilt, leave it to dry, but neither in the Wind nor Sun, and being sufficiently dry, burnish it with a Dog's Tooth.

To know when it is in due temper, pass the Dog's Tooth over it in some little places ; and if it does not rub kindly, but peels off, it is not dry enough.

On the other Hand, take care that it be not too dry, for you will have to much the more Trouble in polishing it, and after all your pains, it will not be so bright as you may wish it. In great Heats three or four Hours drying is enough ; but sometimes it requires a Day and a Night.

To Matt Gold.

Make a Red with Red Lead, a little Vermillion and the White of an Egg well beaten up ; grind the whole upon a Marble, and clap it into the deep or hallow Places with a fine Pencil.

To Matt Silver.

Take White of Ceruse, grind it with Water, and then temper it with Ichthyocolla or Fish-Glue, or else Glove-size very fine ; the first is most beautiful ; you are to lay it with a Pencil upon the places you would Matt.

To make Shell-Gold and Shell-Silver.

Put Leaf-Gold upon a clean Marble, according to the Quantity you would have, and grind it with Honey just out of the Hive, or very pure, till it be extremely soft under your Hand; then throw it into a Glass of fair Water, and stir it, and change the Water till it be very clear or fine. Then pour it into about a Pennyworth of Aquafortis, and there let it remain two Days; take out your Gold, and your Aquafortis may serve another time. The same may be done with Silver.

When you would lay on either the one or the other, temper it with one or two Drops of a very thin Gum-water, and to give it the smoother Face, let your Water be soap'd. It is proper also that you should have a Wash of Gall-stone under your Gold; it sets it off much.

You must be very sparing of your Gold and Silver when you work in Miniature, excepting the Borders round your Work; because it savours too strongly of the Golden Image of Baal.



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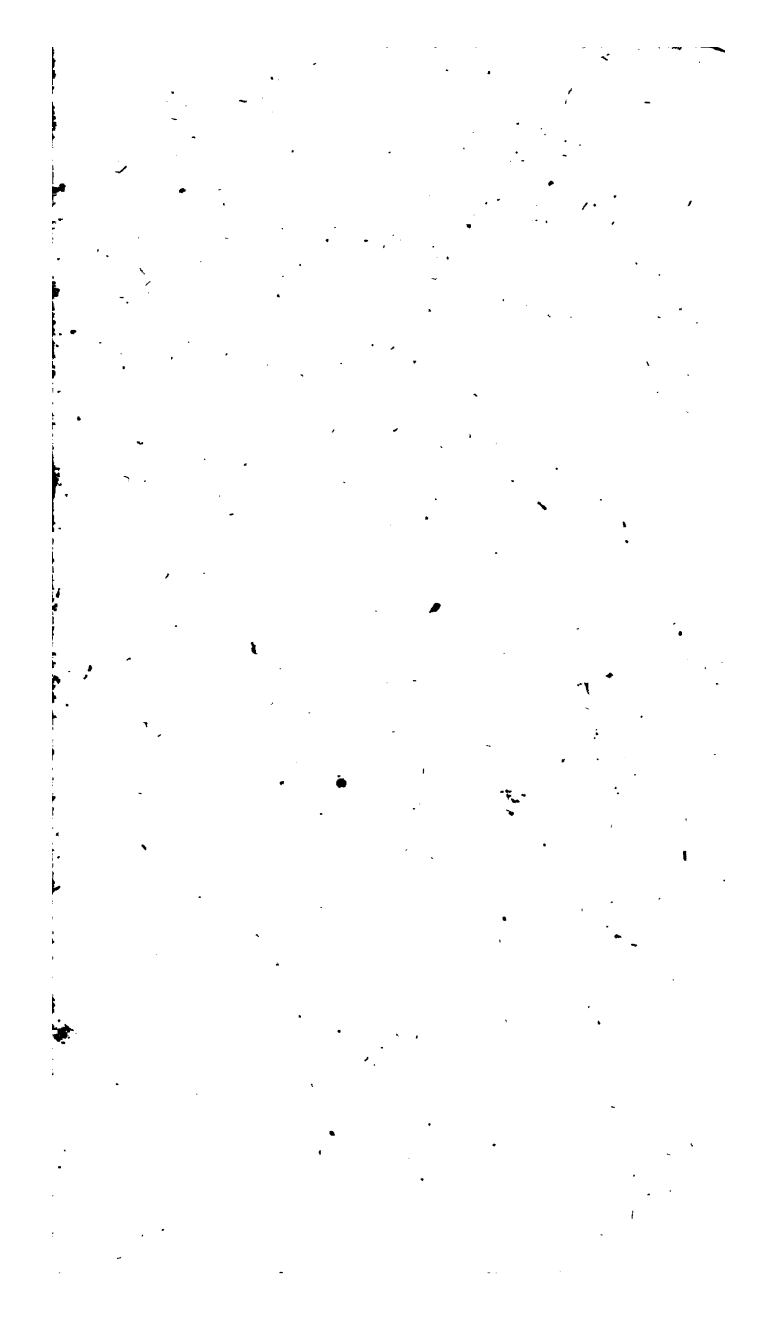


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